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Forest and Well-Being Services for Tourists

Case: Nuuksio



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Forest and Well-Being Services for Tourists

- Case Nuuksio

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Forest- and Well-Being Services for Tourists - Case Nuuksio / report

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Well-being and the health effects of forests and nature have gained research interest during recent years. Forest therapy is a therapeutic method which prevents and cures different kinds of diseases through the help of nature. Forest therapy is focused not only for healthy people to strengthen them physically and fight against stress and fatigue, but also for the sick. The treatment of forest therapy consists mainly in walking trails, jogging and exercising in the middle of forests. Forest therapy has several proven health benefits, for example stress and blood sugar level reduction, improved immunity and even anti-cancer effects. In many European countries, a significant proportion of the inhabitants of large cities, suffer from mental exhaustion, heart and blood vessel diseases, overweight and lack of physical exercise. People all over the world are losing touch with nature, which is leading to decreased awareness of the environment, biodiversity and its positive health impacts.

The objective of this development project was to create service concepts for forest therapy and well-being services for the use of Metsähallitus. The development project was executed using qualitative methods. The material of this study was collected with the following methods: literature review, specialist interviews and contextual interviews. The user-centred service design process proceeded by using three-step iterative process of exploration, creation and reflection. Affinity diagrams, probes, personas and storyboards were used as service design tools during the service design process.

The output of this study was two different forest and well-being service concepts targeted at European tourists: a guided trekking tour and forest triathlon. The integration of users' needs, nature-based well-being factors and the knowledge about the environment's benefits for the human health were the foundation of the study. Nature provides a source for mental wellness by aesthetic factors and multi-sense experiences. The developed service concepts include physical education in a recreational and relaxing environment, which also consider the social and physical aspects of well-being.

Forests provide a wide variety of well-being resources in many different forms. Innovative service concepts for the domain were designed in this thesis, building on current research in ecotourism and human well-being, applying methods of user-centred service design. Demand for such services is likely to grow remarkably in the near future, as ecological awareness increases and consumers seek alternatives for bulk tourism. Forest and well-being services offer great potential for tourism industry in countries like Finland, where untouched nature still exists.

Keywords forest therapy, well-being, ecotourism, service design, service concept

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1 Introduction

1.1 Background of the master's thesis

Industrialization, massive growth of production and population explosion has modified the state of the world during a long period of time. The determined needs for growth and increase of production have damaged nature dramatically in western countries. Pollution is damaging the climate, water systems and soils and deforestation is threatening a number of species and biodiversity. Simultaneously urbanization, increasing challenges of working life, work related diseases and losing touch with nature are globally bothering human beings. Cases of stress related diseases and mental illnesses have increased dramatically during recent few years. In many European countries, increasingly significant proportion of inhabitants suffer from mental exhaustion, overweight and lack of exercise. Urbanization, increasing number of cars and modern information technology has an effect on population's manners of living and physical education. (Tyrväinen & Korpela 2009, 57.) Cities all over the world are experiencing rapid urbanization, which has resulted in economic, demographic and political changes. This has a significant effect on urban as well as natural environment, infrastructure and requirements and the social composition of society. (Costa, Allan, Kasperidus, Suklje-Erjavec & Mathey 2008, 7.) According to this and to continuously decreasing amount of spare time, urbanized human beings are losing their touch with nature.

The current state of nature and common human health is unpleasant and there is a need to spread knowledge about the environment and the ecosystem services it is providing. Human beings are living in large cities around the world and suffer from anxiety and different kinds of diseases related to stress and depressing working conditions. People all over the world are losing touch with nature, which is leading to decrease of the awareness of the environment, biodiversity and its positive health impacts. By spreading this knowledge and designing desirable and effective wellness services, straight impacts for the development of eco-tourism, wellness of nature and well-being of human beings could be discovered. Forest therapy can add a competitive edge to the Finnish tourism. Potential demand already exists for the forest therapy service although it is not provided yet in Finland. The volume of the travelling is increasing and its smaller trends come into existence all the time. A widespread interest of ecotourism is increasing. At the same time the trend of comprehensive tourism is growing and different sub trends are being born continuously. Because the liquidity of the tourists is increasing, the potential for the demand of different services is increasing. When the demand meets the supply, it is really important to create a good mechanism for desirable discovery and accessibility for the service.

Forests and nature are a significant resource that expedites the health and well-being of human beings (Tyrväinen & Korpela 2009, 57). Plants, trees, water systems, changing heights and good care of spaces are features that please human beings. Green spaces are acknowledged for making valuable environmental, social and people's well-being based contributions to the urban environment. (Tyrväinen, Silvennoinen, Korpela & Ylen 2007, 57.) Nature can be an important place for a citizen mentally, socially and physically (Tyrväinen, Silvennoinen, Korpela & Ylen 2007, 57). Even a city park has a favourable influence on people. That is the reason why natural environment and well-being are usually discussed together. (Solja 2011, 1.) Green spaces have valuable benefits, such as the possibilities for outdoor recreation and aesthetic experiences. Also the peace and quietness are experienced as valuable factors. Nature's smells and sounds, feelings of space and freedom are also commonly appreciated. When working properly, nature and its biodiversity offer us many benefits, called ecosystem services. These services include among other things food, medicine, refinement of water systems and toxins, and factors, which directly affect to the well-being of human beings, such as relaxation and recreation.

According to Hemmi (2005, 333), being in touch with nature increases the states of mental and physical well-being of human beings. Designing and developing wellness-based ecotourism services is one answer to the increasing demand of recreation and recuperation, caused by detrimental human actions. According to many medical research, predisposing distressed and indisposed people to experience nature and its biodiversity increases their common well-being, makes them feel better, help them to re-familiarize with their origin and adds their knowledge about the environment and its services.

According to Solja (2011, 1), the situation in Finnish economic life is changing rapidly. The traditional Finnish production-based manufacturing industry is experiencing extensive modifications while companies are becoming global and the traditional production is moving to third world countries. This is leading to a situation where Finland has to develop its service offerings and increase its attraction in global markets. A common opinion is that Finnish green resources, the forests, are in inadequate utilization while ecotourism has become one of the fastest-growing sectors of the tourism industry (Honey 2008, 33.) A common opinion is that besides forestry and wood economy, Finnish forests could be taken to more profitable and wellness-creating utilization by developing ecotourism and wellness-based services. The sustainability of carbon neutral eco-tourism services combined with the exoticism of Finnish nature creates competitive framework for the design and production of desired ecotourism services. Creating these kinds of services would simultaneously increase the sustainable development, conserve the biodiversity and obtain competitive advantage in global tourism markets. Research and development of Finnish ecotourism services could also increase regional well-being and development by refreshing local economic life by increasing the number

of visitors. Biodiversity, carbon neutral tourism and conservation of forests are all key factors to create widespread well-being and a more sustainable planet.

1.2 The objective of the thesis

The objective of this development project is to create design drivers and service concepts for Finnish sustainable eco-tourism services. These concepts can afterwards be developed into forest therapy services and launched across the country in order to increase common well-being, to increase Finnish regional development and to create competitive advantage in global tourism markets. By doing this, the aim is also to spread knowledge of biodiversity and health impacts of nature and forests. This is executed by thoughtful studies to the theoretical background of the subject, by interviewing six representatives of the target group around Europe and by developing design drivers and service concepts by using service design methods, based on the received material about what kind of services the target group would need to experience forest therapy. The target group of this development project are European tourists, who want to experience nature, obtain physical and mental recreation, relaxation, natural experiences and education. The results of this development project have been done for use of Metsähallitus, the author of this development work. Metsähallitus has also defined European tourists as a potential target group of the new services. The goal is to design well-being service concepts, which answer the wellness needs of the potential European target groups. By designing these kinds of service concepts, the purpose is to connect urbanized human beings with nature in order to increase and maintain their well-being. The well-being of nature is increased simultaneously by designing service concepts, which have positive health impacts also for the environment. This has been executed by researching a wide range of material related to nature, well-being, tourism and service design.

This development project was executed using methods of service design. Service design is a concept which introduces new methods and processes for service providers (Mager 2009, 35). Service design tools and methods are used in order to address the functionality and to form the opinions of European tourists. Researchers have tried to ensure the usability and desirability of the services for the customers and the efficiency and individuality for the service providers by using service design tools.

1.3 Structure of the report

Chapter one includes an introduction phase, which introduces the reader to the backgrounds and objectives of the development project. After the introduction and specification of terms, chapter two includes the theoretical framework of this development project. The theoretical background comprises three main topics: forests and wellness, tourism and services, and service design. After a familiarization of the theoretical framework, chapter three leads to the methods and to the execution of the research. Chapter four describes the actual case study, the service design process of forest and well-being services for Nuuksio national park. Ultimately, chapter five summarizes the whole research with the conclusions and discussion.

1.4 Specification of mainline terms

According to Tsunetsugu (2010, 27), the practice of “shinrin-yoku” (Forest therapy) can be described by being surrounded by a forest environment in Japanese medicine. The documented cures of forest therapy are diminished pain, lower blood sugar, reduced stress, improved immunity, better concentration and even anti-cancer effects. The health influences of forests are affecting immediately with greater activity of parasympathetic nerves that promote relaxation, lower levels of cortisol, lower blood pressure, slower heart rates and reduced activity of sympathetic nerves related with reactions to stress. Forest therapy also leads to the positive long-term results, including modifications in hormonal secretion and functions of nervous system associated with metabolism of blood sugar. (Ohtsuka 1998, 125.) In this thesis, forest therapy means using therapeutic methods of this practice, in order to prevent and cure different kinds of diseases of European tourists through the help of nature. This thesis focuses on designing forest therapy service concepts for healthy tourists to strengthen them physically and fighting against stress and exhaustion, and curing the sick ones. The treatment of these service concepts consist mainly in walking trails, experiencing nature and exercising in forests.

Wellness, according to Hemmi (333-335), is a term, which is often used for describing a healthy balance of the mind, body and spirit, which results in a holistic feeling of well-being. Wellness can be described as a process of making selections and adding awareness toward a more delightful existence. It can be seen as state of health, which emphasizes the healthiness of the entire existence and its persistent development. A state, which connects health and happiness, can be considered as wellness. Factors, which are contributing to these factors, have been recognized for long.

Tourism includes many different sub forms. This development project concentrates on eco-tourism and its sub forms, sustainable tourism and wellness tourism. We can talk about eco-

tourism, when we travel in a forest or in nature during the spare time. That arouses feelings of wellness and recreation. Nature can be, as an example, an operational environment, a source of learning and exploitation or an object for passive pleasure. (Hyytiä 2010, 12.)

Service design is an interdisciplinary approach that connects the areas of social and cultural sciences and human interaction. Design methods and design thinking create a link between the diverse views. Design thinkers have the ability to notice latent needs of the user and create new solutions by collaborating alongside other disciplines. Designers can see the service from the users' point of view. (Miettinen 2009, 61.)

Services that do not exist yet are easier to understand with the help of concrete service concepts. Ideally, the service concept describes the essential parts of the service and the customers' needs in understandable way although it does not define all aspects of the service. Service concept gives guidance in company's decision-making process and also different scenarios can be created based on the concepts. (Miettinen, Kalliomäki & Ruuska 2011, 107.)

Design drivers are summarised guidelines for the service design process. The service's goals and requirements need to be defined, prioritized and mapped to create a common direction for the service. (Mattelmäki & Vaajakallio 2011, 97.) In this thesis, design drivers have been used to summarize the most important outcomes of the probes and contextual interviews, in order to clarify the most desirable needs in the service design process of new service concepts.

Service concepts are usually created together with customers and other stakeholders by developing the ideas further. Several service design methods can be used for example interviewing, brainstorming and prototyping. (van Oosterom 2005, 168.) Services that do not exist yet are easier to understand with the help of concrete service concepts. In this thesis, service concepts have been created in order to describe the essential parts of the services and the customers' needs in understandable way although it does not define all aspects of the service.

2 Utilising natural well-being resources in an ecotourism service

This chapter introduces the theoretical framework of this thesis. The theoretical part consists of four main phenomenon related to the topic of this development project. The theoretical framework is described in Figure 1. The chapter begins by going through the current state of the environment and the world and its straight influences to the human health. Theoretical framework includes also facts about heavy working life and its mental and physical influences for a human being. The chapter continues with ecosystem services. These services are already

offering a wide variety of services for all the life on Earth. Theory is connecting these services for the well-being of a human being. The next topic is well-being factors, which are offered by nature. The review highlights these natural resources as wellness factors of new ecotourism service concepts. In the end of the chapter there is a debriefing about the current state of ecotourism and its different sub forms and a review of service design, which is used in execution of this thesis.

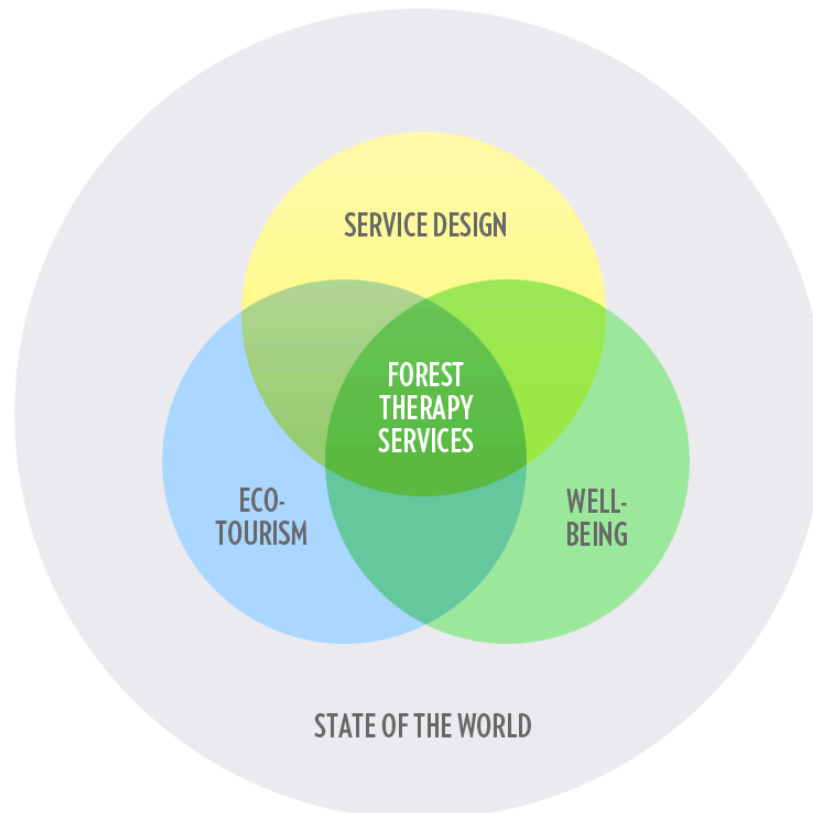


Figure 1: Theoretical framework of the thesis

2.1 Forests and wellness

Unsatisfactory environment has an effect on a human being immediately. It can cause mental depression or even problems in mental health. (Solja 2011, 1) Almost every environmental problem in western industrialized countries can be seen as results from hazardous and ecologically unsustainable activity, absorbed by human beings. These operation modes are endangering the development of whole human kind and its mental, ethic and tangible well-being, and damaging nature and possibilities of living of upcoming generations. (Cullinan 2010, 194.)

2.1.1 The current state of nature and human well-being

Deforestation is the most serious problem, which faces the amount and the biodiversity of

forests. A diverse and healthy forest offers us ecosystem services and goods. As forests are destroyed, this production is discontinued. Deforestation is leading to increased soil erosion and decreased soil fertility. This causes a situation where critical plant nutrients, such as nitrogen, are flushed from forest grounds into water systems in deforested watersheds. Deforestation is one of the biggest factors in species loss. (Chivian & Bernstein 2008, 108.) Every happening takes its own time. Nature needs time to recover from human-caused destruction and insult. There is less time in our parallel than in south. Every vital function is slower in cold. A footprint in lichen coating of an arctic hill is lasting for years while a trail, cleared in a rainforest, heals up in a month. The Nordic nature has had a very short period of time - only ten thousand years - to heal from the last ice age. The soil is thin and very vulnerable. (Wahlström 1994, 118.) Creating forest-based service concepts could decelerate the deforestation and even induce to increased amounts of natural forests. When continued, according to Chivian and Bernstein (2008, 108), deforestation is leading to changes in both global and regional climate. Properly working ecosystem of trees is pumping out significant amounts of water in the air, which falls back to the ground as precipitation. When a forest is destroyed, rainfall can decrease and dryness may become a more frequent phenomenon in the region.

Climate change will deface terrestrial, marine and freshwater and ecosystems. Recent simulations have projected that climate change will result in the disappearance of much of the forests due to hotter and dryer conditions, and its replacement by other kinds of ecosystems. The loss of the forests will decrease the capability to supply forests ecosystem services and products including food, timber, and medicines extracted from plants, microbes, and animals. The disappearance of forests will decrease the capacity to store carbon, which will result in the release of a significant amount of carbon to the atmosphere that had been stored in the forest's soils and trees in organic forms. (Chivian & Bernstein 2008, 107.)

Climate change will have wide effects on freshwater ecosystems and their ecosystem service offerings around the world, with probable changes in the distribution, amount and timing of rain, runoff, and snowfall, leading to changes in availability of water (Chivian & Bernstein 2008, 107). Ecosystems and human beings have conformed closely to the current climate. According to this, climate change, especially if the change is fast, will result to negative impacts. The main impacts are likely to be changes in rainfall, sea level, and temperature extremes (Houghton 2011).

From both the clinical and public health perspective, air pollution remains a relevant topic for health. Polluted air can cause symptoms of asthma and allergies for human beings. (Bascom 1996, 3-50.) However, the biggest damage is caused to the environment and its fauna. Chivian and Bernstein (2008, 112-113) emphasize that the pollution of rain and snowfall, water, air and the land has decreased ecosystem services and goods in a wide variety of ways.

As an example, ozone that pollutes air can diminish the growth of many different kinds of agricultural plants and crops in natural ecosystems. Pollution of snowfall compounds and rain results in acid rain, which is impoverishing soils and damaging plants. It also ruins and acidifies surface waters, which results to deaths of plants and the animals. Heavy metals pervaded from smelters have accumulated in grounds, causing the death of plants in the affected areas. Without the protection of vegetation cover, soil erosion has become a serious problem. Human beings depend completely on nature's ecosystems and on the services they provide, such as water, climate regulation, food, and breakdown of wastes, disease management and the recycling of nutrients, spiritual fulfilment and aesthetic enjoyment (Wahlström 1994, 118). According to Chivian and Bernstein (2008, 114) Humans have changed the ecosystems of the planet Earth more extensively and rapidly than in any comparable time period in the history. The changes have resulted in a largely irreversible and substantial loss in the biodiversity on earth and have had major costs in the form of the degradation of a number of ecosystem services.

Cities all over the world are experiencing rapid urbanization, which is resulted in economic, demographic and political changes. This has a significant effect on urban as well as natural environment, infrastructure and requirements and the social composition of society. (Costa et al. 2008, 7.) Population growth and urbanization are among the most unique and massive features of the twentieth century. This has resulted to significant environmental impacts of the cities. Cities attract people from provincial areas where they might do more environmental damage. However, cities also capture land and take in continuously increasing amounts of energy, materials and water. They produce services and commercial goods, along with solid wastes and pollutants. The environmental impact of cities is wide ranging. The changes in land usage and pollution associated with urbanization changes and diminishes the services and goods that natural ecosystems provide. (Chivian & Bernstein 2008, 111.) Table 1 shows the massive increase of global urbanization during last 60 years.

PERCENTAGE OF TOTAL POPULATION LIVING IN CITIES BY COUNTRY/REGION				
REGION	1950	1970	1990	2010
United States	64	70	75	82
Japan	35	53	63	66
Europe	51	63	72	74
Central America and the Caribbean	38	52	64	70
Sub-Saharan Africa	12	19	28	40
China	12	17	27	45
World	29	36	43	51

Table 1: Percentage of total living in cities by country/region (Chivian & Bernstein 2008, 111).

In many European countries, increasingly significant proportion of inhabitants suffers from mental exhaustion, overweight and lack of exercise. Urbanization, increasing number of cars and modern information technology has an effect on population's manners of living and physical education. (Tyrväinen & Korpela 2009, 57.) Only a few of us are able to choose a workplace based on its healthiness. If voluntariness of health risks were considered as a criterion, occupational diseases would be environmental risks (Wahlström 1994, 112.)

Diseases related to stress and subsidence of physical condition, are increasingly significant reason for absence from work and mental illness. (Tyrväinen & Korpela 2009, 57.) Table 2 shows the most common health risks of modern world.

Harmful factor	Examples
1. Human-caused pollution	Remnants of pesticides in groceries, radioactive fall-outs, passive smoking, increased UV-B-radiation caused by thinned ozone layer.
2. Natural risks	Normal magnitude sunlight, natural carcinogens of vegetables, background radiation.
3. Social risks	Bigger mortality rate of uneducated and poor people, deterioration of public healthcare.
4. Lifestyle	Diet, active smoking, suntanning, few children or no children at all (women), carcinogenic subjects of fried or barbequed food, lack of breastfeeding, child-birth being postponed.

Table 2: The most common health risks of modern world (Wahlström 1994, 94).

According to Leigh and Miller (1998, 197), the most usual work-related diseases in modern world are heart- and blood vessel diseases. These diseases have become enormously more common during the last decades. Both of these diseases are related to noisy, overloading and stressing environment. These factors are shown in every modern workplace, because of continuous compulsive reaching for effectiveness and growth. Wahlström (1994, 112) emphasizes that even though there is lots of discussion about modern working life with its influences of automations and vanishing of heavy physical work, same old occupational diseases are still ruling the disease statistics. The most common causes for occupational diseases of European men are exertion, noise, asbestos, organic dust and ultraviolet radiation. Women suffer mostly about exertion, organic dust, detergents, fungus, mold and noise.

Mustajoki (2010) highlights the threats of diabetes. Diabetes has generalized with an alarming speed. The number of diagnosed diabetes patients is doubled in every fifth year. The most important way to control the weight is rectification of exercise. Continuous, constantly saddling exercise is almost impossible to reach in cities. Also different kinds of allergies have become dangerously more common. Cases of mental illnesses have increased to be the biggest reason for premature retirement. Depression is getting started during a prolonged being exposed to stress. Also with these occasions, the indispensable resource of prevention is rambling in nature. However, every one of us is suffering for different forms of stress every now and then, in the middle of contradictions of working life and family life. (Leigh & Miller 1998, 197.)

When a person is busy or stressed, the environment is not observed with all the senses. This is because an environment of a stressed person is often noisy, dirty and busy. Also coloring and shape of environment can be unpleasant. As a way to survive, human does not want to observe these unpleasant factors in environment and tries to smother their sensing. When these observations of senses are smothered or avoided, the sickness increases because every sense has its own function. (Nurmi 2001, 21.)

Biodiversity means the variety of life on earth and in its ecosystems, populations, genes and species. Human actions that have degraded land, oceans and bodies of fresh water have already caused biodiversity to subside rapidly, and even larger defeats can be expected if the current unsustainable use of natural resources is continued. When an ecosystem, a population, a species or a gene is lost, it is lost forever. While reflecting on the deprivation of biodiversity, species loss has been the mostly used measure. Because there are other levels of organizations with diversities as well, the subject of biodiversity loss is more complex and broader. Also higher levels of diversities have discovered, above the species level in the phyla, classes, orders, families, genera and kingdoms to which species belong, and in ecosystems and or in the types of ecological communities, they are a part of. A deprivation of diversity at any of these levels might be independent of these kinds of losses at another level. (Chivian & Bernstein 2008, 3.)

The most important influences of conserving the biodiversity are not economical but ethical (Wahlström 1994, 134). According to Raitio (2011, 1), decrease in biodiversity and loss of species can always be seen as a potential loss of health-related ecosystem services and genetic resources. The protection of biodiversity of nature and its ecosystem services can be seen as a synonym for protecting a good and high-quality habitat for its inhabitants. A green space can coincidentally protect the existence of some species and be a place for outdoor recreation and activities for the citizens. Especially wide green spaces enable these kinds of diverse ecosystem services. However, there are also contradictions between the protection of biodiversity and supplies of natural experiences. A type of environment, which is extra sensitive or consumable, can be limited outside of recreational usage in order to preserve its natural values. From user's point of view, the soul and possibilities of natural district change dramatically when areas are diminishing and shattering. (Niemelä, Tyrväinen & Schulman 2009, 11.)

Forests support the subsistence of millions of people by producing water, fuel, food and protection against natural hazards. Forests also offer a wide variety of health-related services and goods, from the support of our mental health and psychological capacity to the medicinal compounds. The main factor to conserve these ecosystem services is sustainable forest management, which aims at a balance between increasing demands for forest benefits and products, and the protection of forest diversity and health. This balance is critical for the health

of human beings depending on forests and for the survival of forests. (Raitio 2011, 2.)

2.1.2 Ecosystem services

Nature includes a variety of different kinds of ecosystems; forests, oceans, streams, wetlands, grasslands and estuaries. When functioning naturally, these ecosystems provide conditions, materials and processes that sustain all life on this planet. The benefits that all living organisms obtain from nature are called ecosystem services. These services are developed by a complex of natural cycles of microbes, which break down toxins to the planet wide and long-term cycles of water and of elements such as nitrogen and carbon, which have maintained life for hundreds of millions of years. (Chivian & Bernstein 2008, 75.) Ecosystems can be described as life-support systems, offered by nature, for the human species and for all other forms of life. The basic needs of human biology for water, food, shelter, clean air and comparable climatic constancy are unalterable. (Corvalan, Hales & McMichael 2005, 1.)

Ecosystem services can be divided into four major categories, which are provisioning, regulating, cultural, and supporting services. A provisioning service is any type of a benefit to people, which can be extracted from nature (Adams, Kutner & Stein 2000, 28). Forests provide goods such as food, timber and medicine. These provisioning services are the products obtained from ecosystems and include a variety of foods, medicines, fuels and different constructing materials. Organic material extracted from trees and other plants also supplies 15 percent of the planet Earth's total energy consumption. (Chivian & Bernstein 2008, 76-82.) Interrelationship between ecosystem services, aspects of human well-being and human health are presented in Figure 2.

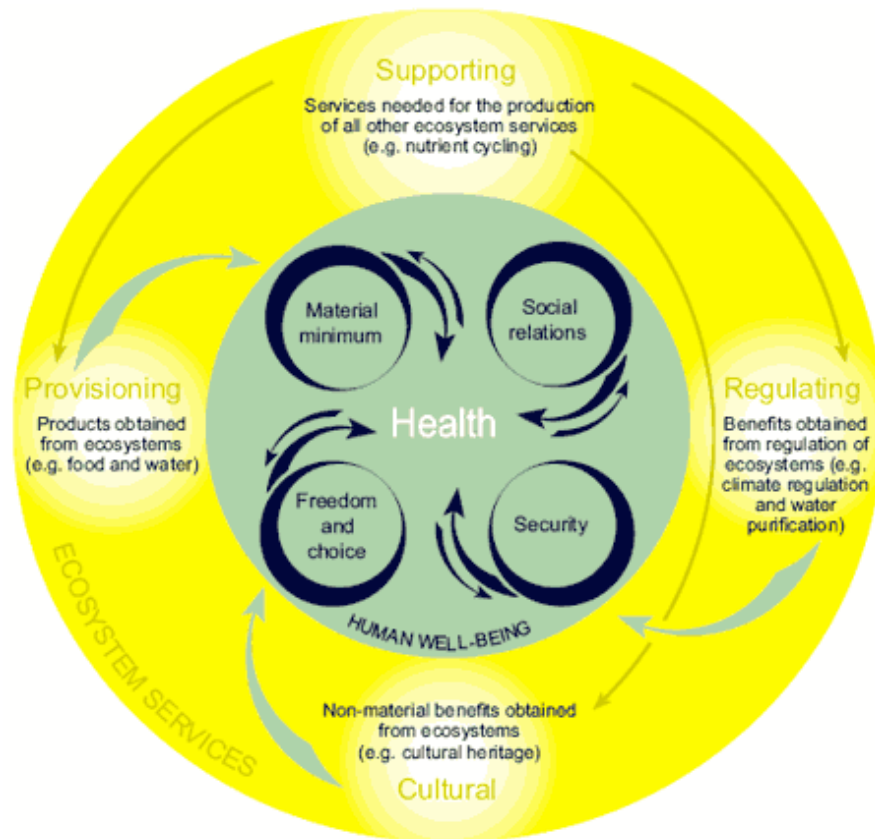


Figure 2: Interrelationship between ecosystem services, aspects of human well-being and human health (Corvalan, Hales & McMichael 2005, 1).

Ecosystems are providing basic services that make life possible for people. Plants are cleaning air and filtering water, bacteria is decomposing wastes, bees are pollinating flowers and tree roots are holding soil in place in order to prevent erosion. All these processes are working together in order to make ecosystems sustainable, clean, functional and substantial to change. A regulating service is a benefit, which is provided by ecosystem processes that restrain natural phenomena. (Adams, Kutner & Stein 2000, 28). According to Chivian and Bernstein (2008, 82-83), Forest canopy is purifying air by filtering particulates and provisioning chemical reaction sites where contaminants are detoxified. Forest canopy is also protecting the soil surface with leaf litter from the erosive power of rain. Forest trees and plants are storing carbon and slowing down global climate change. The roots of the trees are binding soils in order to help prevent erosion. Forests are helping to maintain the water cycle and stabilizing local climates. Deep forest soils are storing large amounts of water purifying it by functioning as a massive filter. Forests are also providing critical habitat for plants, animals and microbes.

Adams, Kutner and Stein (2000, 28) describe a cultural service as a non-material utility that contributes to the development and cultural advancement of people. According to Chivian and Bernstein (2008, 98), these services are nonmaterial benefits, such as recreational, aesthetic, spiritual, and intellectual, that people obtain from ecosystems. Outdoor recreation contributes to human health in a number of different ways. Nature offers recreational opportunities on land and on water. On land activities include such as hiking, camping, photographing, backpacking, bicycling, game hunting, bird watching, wildlife viewing and off-road vehicle use. Water-based recreational activities include swimming, water skiing boating and fishing. A recent poll has demonstrated that more than 65 per cent of human beings use the outdoors for exercise and health, stress reduction and relaxation. Tourism, or more closely, ecotourism, centred on national parks and wildlife, is one of the fastest-growing industries.

Supporting services are essential for the production and functionality of all other ecosystem services and produces new organic substance by plants through photosynthesis and the cycling of life-essential nutrients required for the chemistry of life. (Chivian & Bernstein 2008, 76.) According to Adams et al. (2000, 28), ecosystems themselves could not be maintained without the constitution of underlying natural processes, such as nutrient cycling, the creation of soils and the water cycle and photosynthesis. These processes enable nature to sustain basic life forms, whole ecosystems and people. Without supporting services, there would not be either provisional, regulating or cultural services.

2.1.3 Wellness influences of the forests and nature

The determinants of wellness are better understanding of factors like destiny, health practices, spirituality, environment, security, health services, leisure and social support. The inclusion of wellness focuses on decreasing the principal dimensions of stress, which are chemical stress that causes toxicity of body and mental stress inducing modifications in hormonal stability, and Physical Stress, which irritates the nervous system. (Hemmi 2005, 333-335.) Figure 3 describes different sections of wellness.

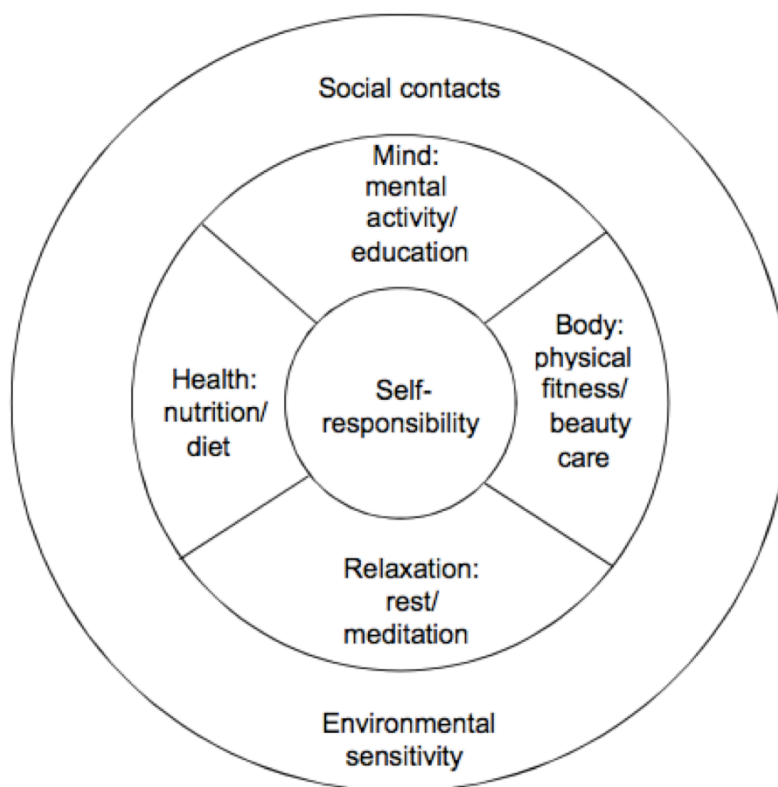


Figure 3: Expanded wellness model (Mueller & Kaufmann 2001, 3).

Plants, trees, water systems, changing heights and good care of spaces are features that please human beings. Green spaces are acknowledged for making valuable environmental, social and people's well-being based contributions to the urban environment. (Tyrväinen et al. 2007, 57.) Costa et al. (2008, 9) define that the benefits of green spaces are extensive and multifunctional, and to aid better understanding and comprehension, these are listed according to their ecological and environmental, social, economic and structural relevance.

Nature can be an important place for a citizen mentally, socially and physically (Tyrväinen et al. 2007, 57). Even a city nature influences favourable to people. That is the reason why natural environment and well-being are usually discussed together. (Solja 2011, 1.) The most valuable benefits of green spaces are the possibilities for outdoor recreation and aesthetic experiences. Also the peace and quietness are experienced as important factors. Nature's smells and sounds, feelings of space and freedom are commonly appreciated. (Tyrväinen & Korpela 2009, 61.) The benefits and roles of green spaces are introduced in the Table 3.

Ecological and Environmental	as a natural resource, supports the protection of natural resources: saving functions of soil, water, flora and fauna, buffering climate, opportunities for enrichment, biodiversity, wildlife corridors etc.
Economic	positive impact on business and on property values, source of additional revenues for the municipality (events, taxes on property, etc.), is the sum of values that people, both individually and collectively, attach to nature
Social	outdoor activities, meeting places, catering for all ages, popular value of being near to nature, venue for events, fairs and concerts, fundraising etc. nature experiences, 'outdoor classroom'
Structural	quality of the urban landscape, visual aspects, effect on property values, aids the identity of a city or an area, defines urban character

Table 3: Benefits and roles of green spaces (Costa et al. 2008, 9).

A human being tries to control the stress by controlling a surrounding environment, like staying in nature (Tyrväinen et al. 2007, 57). Experiencing nature, as its best is an experience, which considers all human senses. A natural experience stimulates the senses, which creates a comprehensive feeling of wellness of body, mind and soul. (Suontausta & Tyni 2005, 245.) The main zones of senses can be divided in three different sectors: long-distance senses include senses of sight and hearing. Skin senses include senses of taste and smell, which are connected together and sense of touch, which divides in senses of heat, cold and pain. The senses of body divide in kinaesthetic senses, which are informing about the state and movement of muscles and joints, and vestibular senses, which mean the senses of stability. Human senses include also visceral senses. An organ of senses is responsible about each sense. These organs produces senses a characteristic experience by physiologically reacting to a stimulus. (Hochberg 1964, 17.)

Nurmi (2001, 21) describes five human senses, the senses of sight, hearing, smell, taste and touch as bio psychological lifelines. Bio psychological lifelines are the factors that connect human beings with nature. Senses are continuously forwarding information about our environment, which is processed in brains to feelings, thoughts, images and different kinds of physical functions, which control our behaviour towards environment, other people and ourselves. If these lifelines, or the information they produce are not observed or treasured, a human being can lose touch with nature or habitat.

Ackerman (1990, 24-25) alleges that nothing is more unforgettable than smell. An unexpected smell can remind memories from far behind. A sense of smell is called a mute sense because a smell can be sensed but not necessarily explained. Smells can affect humans so strongly, that they cannot be nominated precisely. According to Nurmi (2001, 21), surrounding smells have a strong impact for the well-being of a human being. The most natural smell environment is mild and rather good smelling. A sense of taste is connected with sense of smell and they bring together different tinctures to the life and improve mental quality of life, if perceptions are positive. If a human being loses the sense of smell or taste, there can be a threat of losing touch with environment.

A human being is strongly a creature of vision. The visual appearance and structure of environment affect significant to well-being of a human being. Forms, colours and relations of sizes and spaces of elements can affect to well-being, either increasingly or decreasingly. Aesthetic sense, the sense of beauty is a factor that defragments well-being and increases the quality of life. Aesthetic senses are typical for everybody, whoever can sense beauty and receive the feeling of wellness caused by it. (Nurmi 2001, 21).

According to Nurmi (2001, 21), sense of hearing is continuously observing the surrounding soundscape. The sense of hearing cannot be manipulated. It cannot be smothered like a sense of sight by closing the eyes. A silent environment is a natural environment for a human being. However, a typical environment today includes unwanted soundscape. This increases stress, because quietness is important for the well-being and psyche of a human being.

The largest organ of a human being, skin, is forwarding sense of touch. Skin is a sensitive organ, which sense of taste is affected by manners of living and environment. A rough environment can affect both psyche and sense of touch of skin. This leads to a state, when the power of touch does not affect to a human being in a conscious level. When a person is no longer reacting to feelings, it decreases experiences of pleasure, which increases illness. (Nurmi 2001, 21.) We agree this, because senses have a straight influence to well-being. A human being senses an environment continuously both consciously and unconsciously and these senses affect to psyche and to state of mind. A human being experiences the wellness

or sickness over the senses. The consequences of these senses should be recognized as a contributor of wellness and sensitivity should be protected. A human being, who has lost the conscious connection with the senses, has partly lost the connection to own well-being.

Forests and nature are a significant resource, which expedites the health and well-being of human beings (Tyrväinen & Korpela 2009, 57). The value of leisure in natural settings to humans is multiple and includes personal psychological benefits such as better mental health, personal appreciation and personal development and growth. It also offers psycho physiological benefits such as improved cardiovascular health and social and cultural benefits like diminished social problems, community satisfaction, increased cultural identity, a greater nurturance of others, tighter family bonding and reduced social alienation. Economic benefits are such as reduced health costs, decreased job turnover, increased productivity and less work absenteeism and environmental benefits such as improved relationships with, and a greater understanding of, our dependency on the natural world. (Chivian & Bernstein 2008, 99.)

Already watching a natural landscape can be seen as experiencing nature. However, nature can also be experienced with all senses. The main sensual factors of walking in a forest are humming of leafs, smell of moss and a feeling of a rough trail under sole. Natural districts can be, depending on personality, places for relaxation, recreation, familiarization and association, but also unattractiveness and fear. (Faehnle 2009, 83.)

There is an explicit connection between the amount of green spaces and mortality rate. Green spaces improve state of mind, regenerate from stress and increase vigilance more than city environments. A natural environment, which is easily reached, attracts to outdoor activities and staying in nature. This in turn helps to recover from stress and effects positively for mental and physical health. Active exercise and staying in nature both have immediate health impacts, conscious or unconscious. (Tyrväinen & Korpela 2009, 59.)

Forest as an environment decreases stress, relaxes and reassures (Hyytiä 2010, 13). According to Tyrväinen et al. (2007, 58), a natural environment of parks increases the state of mind and regenerates from stress more than urban environments. The factors that influence straight to the well-being of a human being are visible and non-visible, such as health and mental refreshment, clean and healthy environment and the biodiversity of the forests. (Hyytiä 2010, 13.) Natural environment as its best usually causes wellness and good mental health. Natural environment automatically wakes up our positive subconscious feelings, so called affections, which we can't identify or observe. Many people tell that a forest is a place where you can experience the silence, be happy and even mourn. (Solja 2011, 1.)

The recovery and feelings of wellness in nature consists of four factors; the fascination of nature, the feeling of secession from the weekdays, the feeling of conformability and consequence of the environment and the feeling of suitability of the environment. Watching natural landscapes relaxes and adds the feelings of playfulness, friendship and pleasure. Physical relaxation occurs in the functions of brains, heart and muscles. (Hemmi 2005, 371.) According to Harting's (1993) research has proved, that walking in nature decreases pulse and blood pressure faster and more than walking in a city (Salonen 2005, 83).

Well-being caused by a forest is functioning when a person starts consciously recognize its influence. The influence of forests and nature is affecting us continuously, not only during free time or holidays. That is the reason we should have possibilities to recover and gain strength even during working life. The time spent in nature and forests is much better way to search for well-being than mental pharmaceuticals. The forests are offering relaxation and good feelings, that can't be reached in cities. A human being is originating from nature and it has a genetic attraction to return back to its roots. However, natural environment offers proven therapeutic influences and is good for the health of a human being. (Solja 2011, 1.)

2.1.4 Forest therapy

Forest therapy is mostly directional to people living in large cities, who do not know how to use possibilities, offered by nature, for recreation. The largest amount of researches about forest therapy is made in Japan, where are lots of large cities and a serious need of forest therapy as a service. (Mäkelä 2009, 1.) Li (2006, 319-333) emphasizes, that spending time in forest increases the activity and number of natural killer cells, which are immune cells that devastate cancerous cells in the human body. These killer cells are anti-cancer proteins, which include granzymes, perforin and granulysin, and levels of stress hormones such as noreadrenaline and adrenaline. Trees and plants are releasing essential oils, phytonicides, in order to defend against animals, insects and decomposition. According to Kawakami (2004, 27-28), these wood essential oils are creating positive effects of forest air. Green landscape, reassuring sounds of water systems and streams, and natural aromas of plants, wood and flowers in these diverse ecosystems all have a role in a forest therapy experience. Forest therapy is an excellent example of how human health is dependent on the health of our natural environment.

Operational environment of the service concept developed in this development project is a forest. There are plenty of forests in Finland, which possibilities have not been productized the way it could be possible. A forest is an ideal operational environment for a well-being service product, which is based on sense experiencing, because it offers a variable and invigorating environment, which is experienced with all senses. According to Salonen (2005, 64),

only the lingering in nature adds wellness and pleasure. A forest is also the most natural choice as an operational environment for a wellness service product from the point of view of Eco psychology. According to Eco psychology a human being, who is a part of nature, has diverged from the connection with nature. The returning of this connection is essential for human health.

Hemmi (2005, 370) describes nature and forests as a source of physical and mental wellness and good feeling. Already the experiencing of the peace and quietness of forests is an invigorating and wellness-adding experience for people living in crowded districts (Vähätalo & Ruotsalainen 1996, 9). According to Salonen (2005, 64-65) invigoration means positive influences of a nature experience for a human being. An invigorating environment enables emancipation from stress, loading of mental resources and returning of the stability of mind.

A forest as an operational environment offers diverse possibilities for expedition of comprehensive wellness and reaching of aesthetic experience. According to Hemmi (2005, 371), lingering in nature and watching natural landscapes are influencing straight to the functionality of a human body, state of mind and concentration. The recovering from different physical and mental exertions, like stress, is happening specifically in nature. The reason for this is that there are only small amounts of disturbing noise, movement and stimulus in nature. The recovery and feelings of wellness in nature consists of four factors; the fascination of nature, the feeling of secede from the weekdays, the feeling of conformability and consequence of the environment and the feeling of suitability of the environment. Watching natural landscapes relaxes and adds the feelings of playfulness, friendship and pleasure. Physical relaxation occurs in the functions of brains, heart and muscles. Salonen (2005, 83) emphasizes that walking in nature decreases pulse and blood pressure faster and more than walking in a city.

A forest is an aesthetic experience for a human being. One can get absorbed in a forest and it can be experienced with all senses. Rolston (2003, 23) describes a forest as a place to stride in, not to watch. The real experiencing of a forest does not happen until one is inside of it. A forest gives a possibility to experience with all senses. The worlds of voices, smells, lights, feelings and senses are producing natural well-being for a human being, not to mention the relaxing effects of visual landscapes, which create reassuring conditions with deep green colours. A forest also gives a new dimension for arranging experiences. Forest is a totally natural environment, which have not been constructed like usual places, which are normally used to offer experiences, like restaurants, amusement parks and malls.

A forest is a multi-sense environment. It can be experienced with all senses and it fits perfectly as an operational environment for a wellness service product for ecotourism, because of its invigorating effects. Forests can be divided to different sceneries of senses. These are the sceneries of visions, voices, touches, smells and tastes. According to LÜthje (2005, 139-151), the separation of the landscapes of senses does not mean, that traveller would experience them individually or just one landscape at a time. Instead she keeps the separation of landscapes of senses as a very good tool in the design process of travelling products and in investigations of multisensory travelling experiences.

The separation of the landscapes of senses helps to develop accurately considered and appropriate service modules for an ecotourism product. Each one of forest's different sense landscapes is brought forth in service modules by developing activities around them, which enables the diverse conscious experiencing of them. This serves the core idea of ecotourism service product by teaching a human being to be aware of their senses and their possibilities of the abetment of comprehensive well-being. (LÜthje 2005, 152.)

According to an Eco psychological way of thinking, a human mind and body create together an entirety, which is a part of nature. This connection may become disturbed of stress or living environment being located in cities. The lost connection with nature can be searched by gravitating to nature and especially to a forest, which influences invigorating to a human being because of its connection to nature. Staying in nature makes "the feeling of existence" possible. This means a feeling of sufficiency and a feeling of connection with nature. The experience of existence is an important element in recovery and gaining more well-being. (Salonen 2005, 47-61.)

The visual landscape of a forest impacts strongly to well-being of a human being. A recovering natural landscape is not too simple or complicated. It leaves space for imagination to think, what will appear after the next corner of the path, as an example. The landscape has to have some kind of a form or structure, and it has a minding reference point. The landscape has

also depth, which allows one to "go in", as if diving inside, and moving is easy. The water and the vegetation are the main contents of the landscape, and a deep green color impacts calming to the mind of a human being. There may not be any ramparts or landslides in the landscape, because they affect as threats in human mind. (Salonen 2005, 69-70.)

An experience means the internal experiences of a human being. An experience is difficult to describe, because it consists of the effects of perceptions and feelings, forwarded by the senses. An experience is forwarding information about an environment through the senses and feelings affect to internal experiencing of an experience. (Turunen 1991, 146-147.) Pine & Gilmore (1999, 28) describe experience as unforgettable, situation-limited and unique. An experience consists of happenings, which often are followed each other as processes. An experience can be either long lasting or single, instantly born occurrence. (Komppula & Boxberg 2002, 28.) Verhelä & Leckman (2003, 35) emphasize the conscious and unconscious factors of human being, in a birth of an experience. Factors of a conscious state are senses, returning to memories, experiencing contrasts, suspension and fear, knowledge and experiences, illusions and their experiencing and newness and unexpectedness. Unconscious factors are survival, need for nursing, need for safety, need for moving and doing and returning to primitive life.

2.1.1.5 Wellness-based usage of forests

When the population is aging and spare time is increasing, the value of recreational use of the forests is getting significant. Forests expedite wellness and health with their sporting and mental health effects. Biometric measures have indicated, that peaceful walking in a forest can cause as effective decreases in blood pressure as with pharmaceuticals. The lower the blood pressure is, the smaller is the risk for death in heart attack. (Hyytiä 2010, 13.)

The most significant value of nature is its life supporting value. Nature can also have scientific, economical, cultural or historical values. For human beings, nature offers its aesthetic, psychological, recreational and health related values (Faehnle, Bäcklund & Laine 2009, 121). The influences of natural environments for human health are one key challenge for work for encouragement of human health in Europe and Finland. (Tyrväinen & Korpela 2009, 57.)

A forest as an operational environment offers diverse possibilities for expedition of comprehensive wellness and reaching of aesthetic experience. According to Korpela (2001, 21), lingering in nature and watching natural landscapes are influencing straight to the functionality of a human body, state of mind and concentration. The recovering from different physical and mental exertions, like stress, is happening specifically in nature. The reason for this is that there are only small amounts of disturbing noise, movement and stimulus in nature.

An aesthetic experience consists of cooperative influences of all perceptions. Visual observations are emphasized strongly in an aesthetic experience. In environment aesthetics, an aesthetic experience is divided to a thin and a deep experience. An individual experiences a thin aesthetic experience through observations of senses without a further knowledge or understanding of the object. In a deep aesthetic experience an individual experiences the object through information and understanding. (Koivula & Saastamoinen 2005, 40.)

Pine & Gilmore (1999, 35) define an aesthetic experience as a passive but immersed state. An individual is absorbed, in other words deeply impressed about existing environment. An aesthetic experience is actually not learning something new, being involved in something or executing. In an aesthetic experience, the state of an individual is purely being.

According to Turunen (1991, 31), a human being has got a sensual experience of own being, in other words a person feels existence. Sensing own body functions creates a sensual experience, which is called organic sense. Organic sense forwards inner senses of body to consciousness of a human being, such as exhaustion, vitality or body functionally wellness. A sensual experience of own being is composed when a person feels existence and living from inside.

2.2 Tourism and services

Tourism includes many different sub forms. This development project concentrates on ecotourism and its sub forms; sustainable tourism and wellness tourism. We can talk about ecotourism, when we travel in a forest or in nature during the spare time. That wakes up feelings of wellness and recreation. Nature can be as an example an operational environment, a source of learning and exploitation or an object for passive pleasure. Sustainable tourism can be described as an industry, which attempts to make a harmless impact on the environment and local culture, while trying to produce employment, income, and the conservation of local ecosystems. Sustainable tourism is responsible tourism, which is both culturally and ecologically sensitive. (Hyytiä 2010, 12.) Figure 4 models different sub forms of tourism.

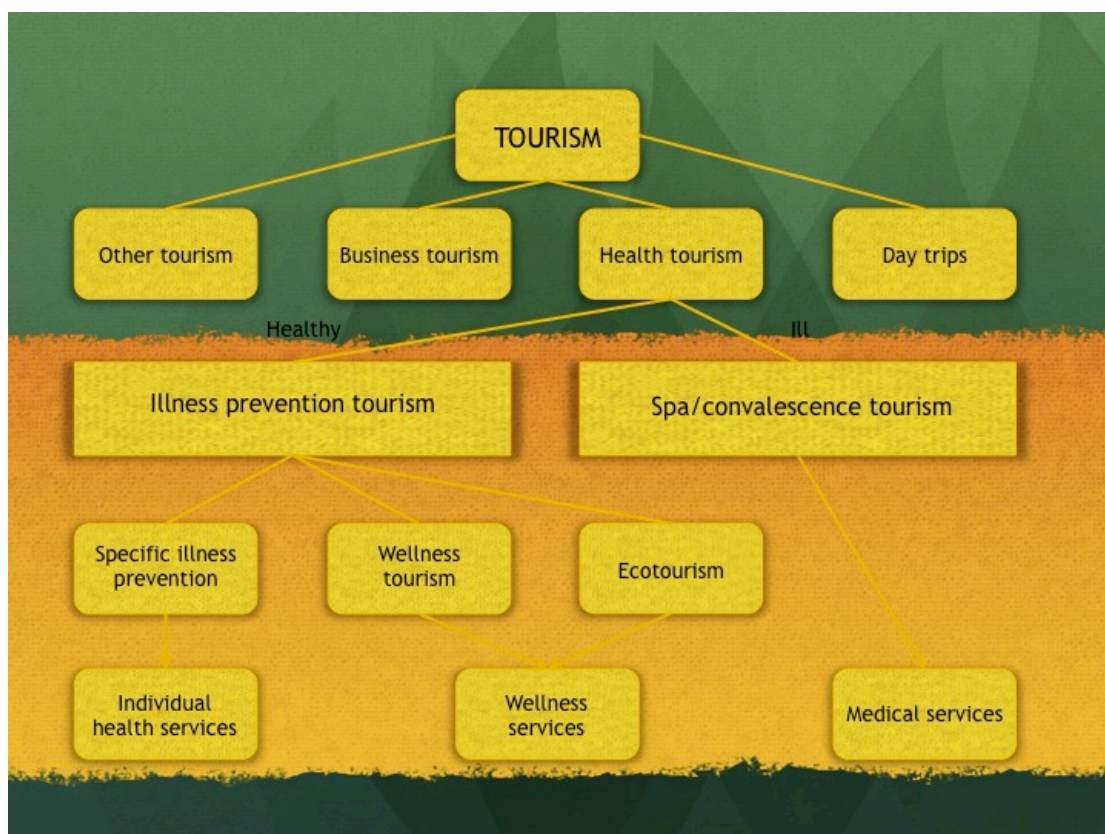


Figure 4: The sub forms of tourism (Mueller & Kaufmann 2001, 4).

2.2.1 Eco- and sustainable tourism

Ecotourism is a sub form of tourism. It is travelling, which means a journey outside own residential area, either independently or with guidance of a tour operator. The main purpose of ecotourism is that a consumer gets experiences of wandering in nature, observing nature, vegetation, animals and health effects of nature. (Lackman & Verhelä 2003, 98.) Ecotourism is based on the gravity of nature and on the activities organized there. Eco- and wellness-tourisms are being developed, because of several evidences of their significantly good influences for the mental health of a human being (Hemmi 2005, 333-335). Ecotourism is one of the fastest-growing sectors of the tourism industry with annual growth of 10-15% around the world. The definition of eco-tourism is the practice of educational, low-impact, culturally and ecologically sensitive travel, which benefits host countries and local communities. (Honey 2008, 33.)

According to Solja (2011, 1), we all should have a forest or green district inside a walking distance. However, we all don't have this possibility. People all around Europe are living in enormous metropolises or places without any nature. They are in a need of mental recreation and relaxing, which is moving their holiday needs towards sustainable- and ecotourism. That

is why the popularity of ecotourism is increasing all the time also in Finland. (Hyytiä 2010, 13.)

Sustainable tourism is tourism, which manages all resources in a way, that economic, social and aesthetic needs can be satisfied while sustaining cultural integrity, consequential ecological processes; biodiversity and life support systems (Clarke 1997, 224). Sustainable tourism can also be defined as a process, which meets the needs of the present tourists and host communities and simultaneously protects and enhances the future needs. Ecotourism should also have a greater influence and connection to the local economy and culture than normal tourism. It can often be seen as a tool for regional development. The whole regional economy profits from the investment, which nation is investing to a national park. (Hyytiä 2010, 13.)

Ecotourism is traveling to natural destinations. These destinations are usually remote areas, which are inhabited or uninhabited, and are usually under some kind of environmental protection at the international, national, communal or private level. Ecotourism produces education and knowledge, for both tourists and residents of nearby communities. (Burger 2000, 39.) National parks, as an example, are popular ecotourism destinations but according to Hyytiä (2010, 12) it is increasingly implemented also in normal forests. Nature itself is the most important attraction factor of ecotourism. In national parks, tourist is mostly attracted by natural state of environment. According to the principles of treatment and usage of conservation districts by Metsähallitus, the conservation districts have primarily to preserve their original nature, but their function is also to recreate conserving nature protection terms. National parks are used as destinations in ecotourism, but the sustainability of these functions are monitored in conservation districts.

Sustainable tourism means tourism, which tries to manage all resources in such a way that social, economic and aesthetic desires are fulfilled while maintaining important ecological processes, biodiversity, life support systems and cultural integrity. According to Swarbrooke (1999, 7) sustainable tourism can be described as having regard to socio-cultural and ecological carrying capacities and involving the local community of the destination in the development process of tourism design. Sustainable tourism involves also integration of tourism with current growth and economic policies in order to decrease the negative social and economic impacts of mass tourism.

The objective of sustainable tourism is to conserve the social and economic advantages of tourism development while decreasing or mitigating any unpleasant impacts on the natural, cultural, historic or social environment. Sustainability principles refer to the economic, environmental, and socio-cultural perspectives of tourism development, and a suitable balance must be generated between these three dimensions in order to guarantee its durable sustain-

ability. This is obtained by balancing the desires of tourists with the destination. (Burger 2000, 39.)

The recreational usage of forests and ecotourism are increasing enormously and different kinds of services are needed (Hyytiä 2010, 14). When utilizing ecotourism, tourists want to have a comprehensive service concept. These journeys are experienced to be too challenging to arrange individually. This creates great possibilities for Finnish ecotourism companies. In the near future, when renovating the structures and procedures of forest industry, strong development and commercializing work of forest-related products and services are needed. The goal is that the entrepreneurship of ecotourism and the commercialization of its services are increasing. The research and development work of wellness and health benefits offered by nature and the productization of intangible benefits will be in a significant position in the near future. (Hyytiä 2010, 14.)

2.2.2 Wellness tourism

Wellness tourism is not a new term. Already in the beginning of 1990's there has been tourism destinations, which have concentrated on fitness and healthy nutrition (Suontausta & Tyni 2005, 11). However, wellbeing and especially wellness have become a crucial theme in our society, where the population is ageing rapidly, working days are quite long, lifestyle is stressing and according to this, also unhealthy. The value of well-being and the number of consumers, who are searching for youthfulness and good condition is increasing all the time. (Suontausta & Tyni 2005, 48.) According to these reasons, wellness tourism is seen as one of the most important developing parts of tourism in near future in Finland but also as a global phenomenon. Wellness travelling services are mostly designed for healthy travellers, who want to add their well-being. The basis of wellness tourism is that a traveller voluntarily gravitates to use wellness travelling products in order to prevent diseases, to feel more healthy, to look better or to slow down the effects of ageing. A wellness travel is an entirety including different kinds of services or products, which increase the well-being of mind, soul and body (Suontausta & Tyni 2005, 42.)

Wellness tourism includes services or products, which stimulates or increases the well-being of human body, mind or soul. (Suontausta & Tyni 2005, 42.) Hemmi (2005, 367) has listed the detailed contents of wellness tourism, which can be the constitution of wellness tourism services and products. Those are physical-, mental- and social well-being, the prevention of diseases, beauty treatment, cherishing, unlimited freedom, healthy nutrition, healing influences of nature, relaxation, different natural treatments, health education, physical education and maintenance of the ability to work. The main motive of wellness tourism is the maintenance and the expedition of comprehensive wellbeing, meaning the balance between physical, men-

tal and social working order and that one is in a positive interaction with the habitat. This living environment includes social community, cultural- and natural environments. (Suontausta & Tyni 2005, 17.)

Wellness tourism is mostly meant for healthy travellers, who want to add their own wellbeing. The basis of wellness tourism is that a consumer voluntarily and consciously gravitates to use a wellness tourism service products to feel more healthy, to prevent different diseases, to have a better appearance or to slow down the influences of aging. (Suontausta & Tyni 2005, 42.)

Wellness tourism is not a new phenomenon. Already in the beginning of 1990, there were travelling destinations, which focused on physical education and healthy nutrition (Suontausta & Tyni 2005, 11). According to Viitala (2011), there can be seen an enormous growth of demand of wellness factors in tourism. People are increasingly searching for physical and mental well-being, also when travelling. In today's society, more and more interest is indicated for the health and well-being of a human being. Wellness services, which prevent and heal different diseases, are developed continuously. (Suontausta & Tyni 2005, 3.)

Because the value of wellbeing and the number of consumers, who are searching for youthfulness and good state of condition, are increasing all the time, wellness tourism can be seen as one of the most important and developing sector of tourism industry in the near future both in Finland and as a global phenomenon. (Suontausta & Tyni 2005, 48.) According to futurologist Koskinen (2007), more and more business fields and their knowledge are connected to the tourism industry. Wellness tourism and ecotourism are one part of wellness- and well-being branch, which includes also social- and health-, culture-, technology-, physical education-, beauty-, medicine-, food- and entertainment fields. (Suontausta & Tyni 2005, 229; Heikkinen & Kortelampi 2004, 38.)

Currently the supply of Finnish wellness and well-being tourism focuses mainly on spas and the wellness services offered by them. The spas are anyhow denounced strongly with a reputation of providers of rehabilitation and entertainment, not the values related to wellness tourism. The service supply of Finnish spas is strongly concentrated only on the well-being of body through physical education, beauty treatment and relaxation. The services and products concentrating versatile on the well-being of mind and soul are still missing in the markets. (Suontausta & Tyni 2005, 151-153.) Other standard components of Finnish wellness tourism products are related to good feelings, which are positive especially for the mind and soul, peaceful, health expediting exercise and social intercourse without any pressure. Although people are mostly searching for peace and silence from a wellness trip, the other important thing is to share experiences and joy together but same time adding the knowledge. (Kuha &

Paukkula 2005, 8.)

There are plenty of possibilities in Finland to produce services, which are answering to the needs of main demand of wellness tourism (Hentinen 2002, 12). In Finland well-being tourism has been closely related to exploitation of nature as source of wellness and that is why well-being tourism can be seen as a part of ecotourism (Hemmi 2005, 336-339). The Finnish nature has been mostly marketed to domestic and foreign tourists by marketing national parks nature and natural environment (Hyytiä 2010, 13). Finnish forests offer a tourism destination, a place to gain strength, wellness as an environment and different activities (Hyytiä 2010, 12). People want to experience wellness and explore the Planet Earth from the perspective of nature; national parks, forests, mountains and monuments of nature, as an example. Wellness tourism has been strongly related to quietness, peace, sauna and Finnish own cultural strengths like forests, swamps, midnight sun, tar, berries, neighbourhood food, Nordic walking, water running, cross-country skiing, stage dancing, rowing in a lake and silence. (Hentinen 2002, 12; Kuha & Paukkula 2005, 8.)

People think that health tourism is more an active than passive concept (Suontausta & Tyni 2005, 26). An active concept of health has points of connection with a modern aesthetics of nature and natural world. The main centre of gravity of the activities and aesthetic experiences happening in nature is the contact between human body and nature. During the last few years, the activities happening in nature, like diving, trekking and fishing have enormously increased their popularity. (Smith & Puczko 2009, 51.)

The meaning of the feeling of well-being is described as a comprehensive feeling of wellness. When a wellness traveller experiences a wellness service with all senses, a feeling of well-being arises. A travelling service, which gives stimulus to senses of sight, hearing, smell, taste and feeling, leaves a lasting track of memory to the mind of a customer. (Kuha & Paukkula 2005, 8.) The main meaning of a wellness tourism service is to produce good feelings to a traveller. However, it has been recognized, that the final responsibility of feeling the experiences leaves for the customer. Good feelings and experiences cannot be felt, though the framework offered by travelling product was in shape, if the traveller do not allow a possibility to enjoy and throw oneself. According to Pine & Gilmore (1999, 23), a company creates a stage and framework for the creation of experiences, but the customer has to carry out the main role. The meaning of a wellness travel product is to offer the framework, that a customer gets freedom to produce good feelings with individual way. Wellness travel product can be memorable, but the strength of the experience depends on one's own attitude and awareness of own well-being. Experiencing good feelings is very individual and it is affected by one's own values, experiences and desires. It is difficult to accurately define, which elements are producing well-being for an individual. The multi pregnancy of well-being is positioning challenges for the product development of wellness tourism industry, because an element,

which produces wellness for one individual, might not produce it to another. It is important to remember the freedom to choose and difference of the customers in the product development process; to fulfil the wellness traveller's travelling motivation, experiencing the wellness actualizes. (Komppula & Boxberg 2002, 21.)

In the breach of forest industry wellness tourism can create more and more versatile possibilities for the future. Tourism and recreation are in increasingly important roles as forms of usage of the forests. The future challenge is better exploitation of the forests, not only for wood production, but also as a source of biodiversity, health and mental well-being of a human being (Hyytiä 2010, 12). According to Hemmi (2005, 366), modern consumers want to invest to their own pleasures and good standard of living. They need services when travelling. This creates requirements for sales, marketing and research and development and increases possibilities to produce of fairways, accommodation services, program services and food services. (Hyytiä 2010, 13.) This kind of hedonistic, pleasure appreciating, lifestyle creates demand for its part for wellness tourism. The stronger including of hedonism to the concept of wellness tourism depends on the way that the field of wellness tourism is developing. (Hemmi 2005, 366.)

2.3 Service design

This thesis concentrates on service design. The material of this study was collected by using the following methods of service design: literature review, specialist interviews and contextual interviews. User-centred service design process proceeded by using iterative three steps of exploration, creation and reflection. Affinity diagrams, probes, personas and storyboards were used as service design tools during the service design process.

Design is a wide term. It has such a diverse essence, that it is difficult to create a pedantic and analogical definition (Ughanwa & Baker 1989, 244). Ughanwa and Baker (1989, 245-246) have listed nearly thirty different definitions for design. During the 20th century, when information technology had its enormous development and generalization, the amount of these definitions has still increased. In modern language, the term design is used in many different purposes, but when speaking about functions related to art and design, its extremity can be seen in art handcraft and industrial design. However, almost all planning work from engineering technology to marketing strategies can be seen as design or planning. (Lehtinen 1995, 8.) Design is often seen as appearance of products, objects and things, which are related to forms, text layout, colours, different kinds of surface materials or figures, or as technology or comfortable usage of a product, such as ergonomic design (Oakley 1990, 8). The objects of design can also be services, communications, environment or identity, when design is referring not only to results, but also to the process itself. Design is planning activity, which is

targeted to industry, trade and service industries and organizations of public sector (Lindström, Nyberg & Ylä-Anttila 2006, 28). When design is seen as business, it covers the entirety of business activity of industry and design services. From the perspective of industry, this can be seen both as design-based production and as fields of production and companies, which are exploiting design either in their products or in corporate image (Korvenmaa 1998, 31).

There have always been services, but people have not previously thought about service design (Manzini 2009, 44). The service revolution has started and the monopoly of the industrial era has ended. There are four main drivers for the service revolution: the service economy is booming, the product market is satisfied, technology enables service and humans have individual needs. The service economy has grown rapidly in developed countries and service sector has been recognised as a vital part of the economy beside agriculture and manufacturing.

Consumer market is full of similar products. More and more often products can be seen as platforms for services. The purpose of services is to add more value and competitiveness against similar products. For example, the mobile phone is just a product that enables the use of communication service. New technologies have also taken over the field; the Internet, computers and mobile devices beside several others are enabling the new services. Customers' different needs and expectations for the same service usually vary a lot depending on the situation and context. For example, the use of airport services is not the same if the customer is on a business trip or on family holiday. Companies cannot assume anymore that there is only one right way to serve all the customers with individual needs if they want to keep the existing customers and offer new value for them. New service concepts need to be designed to fulfil the needs of service market and to keep up with the competition. (Moritz 2005, 23 - 27.)

Designing new services that are intangible processes is challenging. Service design structures services and user experiences with new concepts and terms to make them more concrete. (Koivisto 2011, 43.) Service design is aiming for overall experience of a service and strategy to provide a certain service. It is essential to understand all the stakeholders and the market. (Moritz 2005, 39.)

2.3.1 Service design as an interdisciplinary approach

Service design arose at the beginning of the 1990's. Design, marketing and research are integrated in service design and it connects organisations and customers in a new way. (Moritz 2005, 7.) Initially, marketing focused mainly on goods. However, from the 1970s onwards the focus has shifted as researches have realised the growth in economic value in services. It was

recognised that it is important to understand the processes how customers interact with companies in more detail. Three extra factors, participants, processes and physical evidence, were added to the classic “4 Ps” of the marketing mix of product, price, promotion and place. (Kimbell 2010, 47 - 48.)

Service design can be understood in several different ways. Van Dijk, Raijmakers & Kelly (2010, 29) say: “If you would ask ten people what service design is, you would end up with eleven different answers - at least”. There is not yet a common definition or language of service design. Stickdorn (2010, 14 ; 29) emphasizes that the service design approach is rather young and still developing. He thinks that it can also be considered as a new way of thinking compared to stand-alone academic discipline. Stickdorn (2010, 30) says: “Service design as a practice generally results in the design of systems and processes aimed at providing a holistic service to the user.”

According to Stickdorn (2010, 32), business can use service design to understand the customer needs better. Miettinen (2009, 11) says that co-design and constant iteration processes create a clear link between different service processes and methods. According to Moritz (2005, 6 - 7), the aim of service design is to innovate and create new or improve existing services. The intention of service design is also to ensure that services are more usable, useful and desirable for users and effective from the supplier’s point of view. Service design is designing interactive user experiences, systems and processes with special service design tools and methods. In addition, Mager (2009, 31) says that the insights that interaction design offers, help to create more user-oriented services.

Although the difference between product and service design is significant, service design has its roots in product and interface design (Mager 2009, 35). Services are not tangible whereas products are. Services cannot either be separated from consumption or be stored or owned like products. Usually services are complex experiences, quality of which is not easy to measure. (Moritz 2005, 28.) On the other hand, people want rather solutions and outcomes than services or products. For example, the need of talking to someone is an outcome that is just possible via a phone. (van Oosterom 2005, 167.) Service design also utilizes marketing expertise, although it focuses on service-specific challenges (Mager 2009, 35).

In service design, the process itself is more important than its outcome. The outcome of the design process varies; it can be abstract, service experience or concrete physical item. (Stickdorn 2010, 126.) According to Moritz (2005, 39), the overall experience of a service is the key of the service design. He highlights that it is important to understand all the stakeholders and the market as a whole, generate ideas and to help implement them in the implementation phase. Mager (2009, 38) also says that service design approach is integrated.

Designers need to be aware of the context of the service because the whole system needs to be understood in order to design new services. (Moritz 2005, 26.)

One typical characteristic for services is that they are interdisciplinary. Especially in user-centred design, the importance of interdisciplinary is highlighted because the situations are observed from different stakeholders' point of view. (Mattelmäki & Vaajakallio 2011, 78.) According to (Moritz 2005, 26) interdisciplinary work is a necessity. Human-centred design approach is often the core of the design process because people's behaviour needs to be understood or influenced. "No computer, machine or robot can cope with the individual needs of customers sufficiently. Service is a big opportunity to offer a totally new dimension of value."

The economic basis of all industrial nations have changed significantly from manufacturing to the provision of information and services in the last four decades. Service-specific approaches and methods are needed in innovative companies all over the world when shifting to service business and building service offerings. (Mager 2009, 28 - 29.) The number of product innovations has been increasing all the time but there has not been a considerable interest in service innovations although the service economy has growth (Fastcompany Staff 2005).

Co-design has become more and more popular in service design. Users are an essential part of the design process by collecting and sharing data and telling about their service experiences. Service design can be seen as a part of a bigger phenomenon in which co-creating has replaced the traditional product development process. (Miettinen 2011, 21)

2.3.2 User-centred service concepts

First principle of service design thinking is that the services should be designed from customer's point of view. It is essential to get the customers to participate into service design process because the interaction between the service provider and customer is needed. Customers' various needs and individual service experience in wider context should be taken into account in order to design a user-centred service. (Stickdorn 2010, 34 - 37)

Concepts are descriptions of possible solutions, which can be elucidated for example by creating different kinds of visualisations or interactivity maps. Concepting can also be utilised when innovating new solutions, concretising alternatives, foreseeing or developing creativity. (Miettinen, Kalliomäki & Ruuska 2011, 119.) Service concepts are usually created together with customers and other stakeholders by developing the ideas further. Several service design methods can be used for example interviewing, brainstorming and prototyping. (van Oosterom

2005, 168.) Services that do not exist yet are easier to understand with the help of concrete service concepts. Ideally the service concept describes the essential parts of the service and the customers' needs in understandable way although it does not define all aspects of the service. Service concept gives guidance in company's decision-making process and also different scenarios can be created based on the concepts. (Miettinen, Kalliomäki & Ruuska 2011, 107.)

2.3.3 Service design process

There are various methods and tools for a service designer based on design research and design thinking. New service concepts and products are created with several innovative methods as a result of systematic service development process. The human-centred design approach helps to create user-friendly and desirable services with unique value proposition for the customers. (Miettinen 2009, 76.) One of the most important things is to understand value and nature of relations between all the stakeholders in service design process (Kimbell 2010, 51). On the other hand, it is impossible to find common design principles or service features because every single service has its own special characteristics that set the requirements for the methods (Mattelmäki & Vaajakallio 2011, 78). Service design process requires good social skills and the ability to feel empathy for the users and stakeholders in order to understand them better. Visual thinking skills and creativity are also prominent features when creating new solutions, service concepts and experiences for the users. (Miettinen 2009, 60.)

Service designers are aiming to discover the needs and experiences of each stakeholder regarding the service. They try to find out possible new solutions by transforming them into future services. Bridges between business, technology and design patterns are created as a result of a design process. (Mager 2009, 35.) The first phase of the service design process is always to define and find out the customer needs and desires. An objective of the first phase is also to find out the latent needs that a user may have. Latent needs are product requirements or new solutions that users are not able to even imagine yet. New technological development can also provide new solutions to fulfil users' needs. (Miettinen 2011, 18 - 31.) By observing the users closely in their everyday life the designers can get an idea of what the users think and feel (Samaliois 2009, 125).

In co-design, the users, experts and specialists from different fields are taken into the various phases of the design process. Several innovative techniques and methods are used in co-creating and its aim is to inspire design work and produce data and solutions together. (Mattelmäki & Vaajakallio 2011, 77.) In the co-creating approach, services and solutions are designed especially from the users' point of view (Mattelmäki & Vaajakallio 2011, 94). Mager (2009, 31) states the significance of design thinking and innovative methods as service design tools. They can be used when co-creating services and defining desirable value propositions.

Using service design can help to create a more sustainable society.

According to Stickdorn (2010, 34) there are five principles of service design thinking: user-centred, co-creative, sequencing, evidencing and holistic. Services should be designed from the user's point of view and all stakeholders should be taken into design process. A service should be seen as a sequence of interrelated actions and the context of the service and the big picture should always be taken into consideration. Mager (2009, 38) also says that customers should be active partners and co-creators of value into the service delivery process. In the area of service design, the possible challenges in the future are to find more innovative ways in which users can participate in the service development processes and in creating new kinds of value propositions (Miettinen 2009, 76). When designing services, the mix of utility, usability and pleasurability should be taken into account (Clatworthy 2010, 87). Continuous development is also essential because services can be constantly changing in time (Moritz 2005, 39). Service design reacts to changing environments and varied users' needs. Values and meanings of the service may vary in different circumstances in users' everyday life. (Miettinen 2011, 26.)

Mager's service design process consists of four different phases. The aim of the first phase is to identify all aspects that have an effect in the service system, for example, users' needs and experiences from the service. In the second phase, the designer is co-operating with the users to get an idea of the best possible service experience. Prototypes are used in the third phase to evaluate the strategy. Customer research helps to identify possible problems regarding the service experience. Finally, in the last phase, the implementation starts. Implementation phase requires the knowledge of processes and IT solutions. (Miettinen 2011, 33.)

According to Moritz (2005, 123), there are six different stages: SD (Service Design) Understanding, SD Thinking, SD Generating, SD Filtering, SD Explaining and SD Realising. Every stage has its own goals and service design tasks that are presented below in figure 6. In the first stage, all the relevant data about stakeholders and the context is collected. In the second phase, Thinking, the strategic direction for the project is set. In the generating stage, the new ideas, innovations and service concepts are created and the best concept is chosen in the filtering phase. Prototypes are created to make the idea more concrete and tangible in the explaining phase. The last stage is the implementation phase, where the guidelines and implementation plans are created for the service concept. (Moritz 2005, 123.)



Figure 5: Service design tasks (Moritz 2005, 123).

A very basic approach for a complex service design process is to use the following four iterative steps: exploration, creation, reflection and implementation. There exist several various service design process frameworks but fundamentally they are all the same. The wording of the different stages varies in different design process frameworks but in practise they all share the same mindset. Project budget, available resources and customer's opinions influence also the design process case by case. They relate the amount of money and time spent to a certain phase. (Stickdorn 2010, 126 - 127.)

In the first stage, the exploration phase, the true motivations behind the current and potential users' behaviour are discovered as a foundation of the service. Designers are aiming to understand the context and new perspectives of the certain service. (Stickdorn 2010, 128.) During generative and iterative creation stages, new ideas and concepts are visualised and tested several times with all the main stakeholders in interdisciplinary teams to find the best suitable solution based on the identified problems. Various methods can be used to co-create user-centred solutions and holistic concepts. (Stickdorn 2010, 130 - 131.) Selected concepts are tested in the reflection phase to improve the ideas further. Feedback and constant improvements play a key role in this phase to reach the goals.

Intangible services are challenging to test but there are various methods to make testing easier: storyboards, comic strips, videos or photo sequences help to find the emotional aspects of the service. Prototyping concepts in real environment or circumstances close to reality is vital. (Stickdorn 2010, 123 - 133.) It is essential to communicate the concept's desired customer experience and service's vision clearly in the implementation phase. Employees should be involved in service design process from the very beginning because their motivation and support is crucial, especially in the implementation phase. Management needs to be convinced of the concept and possible problems should be solved creatively and as quick as possible to put the ideas into action. The evaluation process should follow the implementation phase to lead to the iterative service design process. (Stickdorn 2010, 134 - 135.)

2.3.4 Service design methods and tools

User centred design methods can be divided into three categories: traditional methods, adapted methods and innovative methods. In traditional methods, research material is collected, analysed and visualised easily (e.g. marketing research, target group research and polls). Collected material is usually quantitative and measurable. Adapted methods, for example video documentation and video ethnography, are originally used in traditional humanistic research but adapted to fulfil the designers' needs. Innovative methods are rationalized ways to collect user information via creative techniques. Co-operation and visualising dimensions are important, for example in workshops, user prototyping and visual diaries. (Hämäläinen, Vilkkä & Miettinen 2011, 64.) There are a countless number of service design methods available. Some of them have been adopted from related fields whereas some of them have been created specifically for the service design process. (Moritz 2005, 185.) Only methods and tools that are relevant regarding this development project are discussed.

Interviewing experts and specialists during the service design process help to gain understanding of new areas in very short time. Experts need to be selected carefully based on their expertise from a certain field related to the service. Preparing the interview themes and questions is essential. Usually specialists' experience helps the designers to find out possible problems and also solutions for the service. (Moritz 2005, 190.)

Contextual interviews can be conducted in service process context or environment with users or other service stakeholders. In order to get desired insights the interviewee's behaviour can be both observed and probed by using a combination of questions and observations. This ethnographical method requires that participants feel comfortable to share their deepest insights into their lives. To gain an understanding of why users behave in a certain way is essential. Interviews can be recorded in video or audio format allowing the designer to focus on user's latent needs and behaviour. They need to be analysed carefully afterwards. (van Dijk,

Raijmakers & Kelly 2010, 162 - 163.) A face-to-face interview is a qualitative way of collecting information. It is a quick way to learn users' expectations and experiences related to the service. (Moritz 2005, 193.) Contextual interview is an effective method to collect information about service interaction and experience. Service designers can get good insights about users' behaviour and reasons behind their actions when they are using the service. (Moritz 2005, 187.)

Probes are one of the most well known innovative methods to collect user data. Self-documented diary is a typical example of probes. (Hämäläinen, Vilkkä & Miettinen 2011, 65.) Probe kits are designed individually for each service design project to achieve the service's design targets and goals. Packages can contain several different tasks to document user's daily activities and experiences related to the service. (Hämäläinen, Vilkkä & Miettinen 2011, 73.) Probe packages aim to gather users' most intimate insights, beliefs and desires to inspire the service design process. One of the key benefits of probes is to overcome possible cultural boundaries and to connect people from different backgrounds into the design process. (van Dijk, Raijmakers & Kelly 2010, 168 - 169.) There are four reasons to use probes in service design process: inspiration, information, participation and dialogue. Probes can inspire the designers and it can be a way to collect information and data about the users. They can also be used as an incentive for the users to participate in the design process as well as they can create a dialogue between the users, the designers and the whole design team. (Mattelmäki 2006, 58.)

An affinity diagram can be seen as a creative process. It is an ideal tool for organising and gathering ideas and insights. Complicated issues are easier to understand by breaking them into pieces and organising them in broad categories. The goal and a time limit for the session need to be set at the beginning. Ideas are created individually, for example, at first on sticky notes and then arranged together into related categories. (Moritz 2005, 202.) An affinity diagram is a method to clarify the design process and interpret the created ideas. It is the easiest and quickest method to find crucial problems from the users' aspect. Collected information is usually organised into categories in a hierarchical diagram. Firstly, all ideas are written on sticky notes and after that the groups and categories are created based on possible similarities between the ideas. (Hämäläinen, Vilkkä & Miettinen 2011, 75.)

Personas are hypothetical archetypes representing a certain target group. They help the design team to simulate the typical potential or existing customer of the service. Personas are used throughout the design process as a reminder of what the user of the service wants and needs. Usually the persona profiles are constructed by using the insights from the target group interviews. (van Dijk, Raijmakers & Kelly 2010, 178 - 179.) In-depth research creates a base for the personas. A certain group of users can be understood in more detail with the

help of fictional characters. Personas can also be referred in design decisions regarding the service. (Moritz 2005, 220.) Typically, a persona consists of a name and description of the character, behaviour, goals and lifestyle. They are essential tools to understand the user's needs and motivations more deeply. (Koivisto 2011, 59.)

A storyboard is a visual and user-centred tool for demonstrating a certain sequence of events or service use cases as a series of drawings in a narrative form. It can include a visualisation of a new service prototype or a common service occasion. Contextual details and key aspects of the service are important in a user experience story. Storyboards provide a visual angle for the service prototype and those can be used to generate discussion about potential issues. (van Dijk, Raijmakers & Kelly 2010, 186 - 187.) Visualising and identifying problems that users may face during the service experience helps to find new innovations and solutions for the issues. Service requirements and additional values can be reflected against the storyboard to evaluate the service concept idea before prototyping and testing it further. (Vaahtojärvi 2011, 150.) Service experience is explained step by step and it makes it easier to understand different service touchpoints and their relations. Given that it is a simple format for presenting concept ideas, the challenging part is that it can be easily understood in different ways and there is always a risk for misunderstanding. (Moritz 2005, 230.)

Design drivers are summarised guidelines for the service design process. Service's goals and requirements need to be defined, prioritized and mapped to create a common direction for the service. (Mattelmäki & Vaajakallio 2011, 97.)

Service blueprinting contains visual modeling of the whole service process and underlying organizational structure, insights as to how stakeholders' responsibilities and roles fit into the integrated entirety and all of the important touch points at which the customer experiences quality. There are also shown the underlying relationships and support processes, which support and drive service delivery, detailed descriptions of the service process with respect to time, equipment and economical factors. Service Blueprinting is an objective, structured and comprehensive way to present the relationships, activities, and interdependencies of a service process in a way, which is flexible enough to enable benefit from creative input. Blueprinting enables the decomposition of a service into meaningful chronological segments. It also allows organizations to reference the service processes visually, physical evidence and points of customer contact, and of these all together in one place. Service blueprinting provides a beneficial platform for those who design, enable and deliver services to effectively participate in the service innovation process. (Bitner, Ostrom & Morgan 2008, 71.)

Customer actions of a service blueprinting process include every step that a customer takes as part of the entire service delivery process. Onstage/visible contact employee actions include

the actions of frontline contact employees that are visible as a part of a face-to-face intercourse with customers. Backstage/visible contact employee actions include invisible interactions with customers, such as e-mails and telephone calls, or all other activities employees strive in order to prepare to serve customers and their role responsibilities. Support processes include all other activities, which are carried out by individuals in a company, other than contact employees, but whose functions are decisive for carrying out the services processes. Physical evidence includes all of the concretes that customers are exposed or collect to during their interaction with a company. (Bitner, Ostrom & Morgan 2008, 72.)

As a summary of the theoretical framework can be said, that the current state of nature and human health constitute a foundation for this development project. Nature and human beings are not feeling well, which turns people to think increasingly about nature. Big cities are estranging human beings from their origin even more, which increases the demand of ecotourism services. This turns ecotourism services into a massively growing industry. An increasing knowledge is also nature's health benefits, which have arisen as one of the most researched topics in tourism and health industries. Knowledge has developed to a science of forest therapy. Forest therapy offers obvious health benefits for human beings, but it could also be a benefit and a competitive advantage for Finnish ecotourism industry. As ecotourism still is a quite new business, its services have not yet been designed satisfactory. This development project is about to design design drivers and service concepts of forest therapy, using methods and tools of service design. The chapter three leads to the execution of the development project.

3 The execution of the development project

This chapter introduces the project's strategy and approach, continuing with a thoughtful description of the design process of the services. The description includes the whole service design process, starting with preparation for the process; inspirational interviews, obtaining material, designing the themes for the interviews and selecting the interviewees around the Europe. The process continues with description of the design process itself; using service design tools for examining the material and finally finalizing the material for next steps of the service design process. The chapter continues with describing the applied methods, followed by the analysis of material. The ending of the chapter analyses the reliability of the research.

3.1 The project strategy and approach

This is a qualitative development project with a case study approach. According to sociologists, the confrontation of qualitative and quantitative research methods has been a topic of impetuous discussion for a while (Kvale 1996, 68). In literature of methodology of social sci-

ences, focusing on quantitative research, qualitative research is often seen as a methodology with lower value (Silverman 2000, 9). Qualitative research is often located to a role of so called feasibility study. In that case are taught that a quantitative statistical research is executed later with a purpose of a research aspiring to essential science producing. This can also be seen conversely, because qualitative research can be used quite familiar for deepening the information acquired by quantitative methods. (Koskinen, Alasuutari & Peltonen 2005, 24.) Both qualitative and quantitative research methods are tools, which usefulness depends on suggested research problem (Kvale 1996, 69). The selection between qualitative and quantitative research methods should depend on what a researcher wants to find out in a research (Silverman 2000, 1). Qualitative factors refer to quality and basic character of a matter and quantitative factors refer to quantity and magnitude of a matter (Kvale 1996, 67). A basis of qualitative research is to describe real life and research a target as comprehensive as possible. Qualitative research aspires to find and discover facts instead of trying to authenticate already existing claims. (Hirsjärvi, Remes & Sajavaara 2001, 152.) In this development project the topic of interest is a character of a phenomenon of real life, which is an argument for choosing qualitative methods as methodology.

This development project was executed by using a case study. Case study can be seen both as a learning process and an output of learning (Ghauri 2004, 109). Case study is an advisable research approach, when there are questions of how and why, when a researcher does not have a possibility to control incidents and when the focus of a research is in a currently happening phenomenon of real life. Case studies can be divided to three different types: explanatory, exploratory and descriptive case studies. (Yin 2003, 1.) This development project focuses on examining a currently happening phenomenon of real life, relations between traveling service design and the potential customers, which incidents the researchers are not able to control. The objective of this development project is to create design drivers and service concepts for sustainable eco-tourism services, which can be developed into forest therapy services and launched across the country in order to increase common well-being and increase Finnish regional development. The objective is also to create design drivers and service concepts for Finnish eco-tourism services, which can create competitive advantage in global tourism markets. By doing this, the aim is also to spread knowledge of biodiversity and health impacts of nature and forests. Hence an exploratory case study is the most suitable research strategy of this development project. A case study can include one or more cases (Yin 2003, 39). A single case can be an object of a research, when the particular case is wanted to explain or question the theory. Single cases can also be researched, when a study reveals new matters and offers new perspectives (Ghauri 2004, 114.) The examination of a single case is also justifiable, when the case is somehow unique (Yin 2003, 40).

Examining a single case can be justifiable when the case is representative or typical (Yin 2003, 41). This development project can be seen as quite typical, because the chosen development target represents perfectly an average northerner travel service concept and its possible executors are quite young and small companies, owned by shareholders (The Future in Design 2004, 13; Rindell 1998, 114). The relations between service providers of Finnish wellness travel service products and their customers represent well a typical situation in tourism business (Tuovinen 2001, 36).

3.2 Service design process

In order to design service concepts around the forest therapy we used the following three phases: exploration, creation and reflection (Figure 7). The design process is an iterative process and it is essential to revert to a previous phase whenever needed. (Stickdorn 2010, 122 - 124).

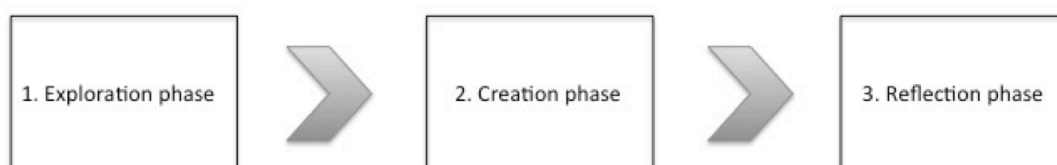


Figure 6: First three phases of the service design process (Stickdorn 2010, 122 -123).

At service design process' first stage, in exploration phase, the six experts and specialists from related fields were interviewed to get the deeper understanding, insights and inspiration of the subject area of the thesis. Interview themes were prepared carefully before an each interview. Specialists' experience and knowledge helped us to find out the possible problems and also solutions to them for the upcoming service. Our aim was to discover the potential users' true values, goals and needs during the first phase. To gain information about the potential users, we designed a probes kit and delivered it to six persons of the target group. Probes kit consisted of diary and different types of tasks. We wanted to find out the users' daily experiences and also their insights, beliefs and desires related to the service. Probes gave us an inspiration and early ideas for the service. The theme interviews were prepared based on the insights that the probes revealed. Interview questions consisted of themes related to the forest therapy services. We wanted to find out what kind of relation users had with nature and also previous service experiences were discussed. We also prepared ten different kind of claims and asked the interviewees to sort the in the order of importance to find out what they do value the most. With our interviewees' permission, we audio-recorded the

interviews along with taking the field notes and interviews were transcribed later on. This qualitative study was executed as an interview development project of potential European customers of Finnish wellbeing travel services. There are many different ways to choose the interviewees. Qualitative research is often engrossed only to a small group of occasions, which are aspired to analyse as thoroughly as possible. The scientific content does not define its quantity but the quality of material and the coverage of conceptualizing. (Eskola & Suoranta 1998, 18.) However, the content is mostly received only from one or more cases. It is improbable, that these cases are chosen accidentally, but quite often a case becomes chosen because its accessibility for a researcher. (Silverman 2000, 102.) In this kind of discretionary sample researcher's ability to create strong theoretical backgrounds, which are guiding the acquisition of material for a research, arises as an important matter (Eskola & Suoranta 1998, 18).

New service ideas and concepts were created in second phase of the service design process. The collected material from the first phase was re-organised and interpreted carefully. Also possible problems regarding the upcoming service concepts from the user point of view were discussed at this stage in order to avoid them on later phases. The several service concepts were created from which we selected two most suitable ones from all stakeholders' point of view. The selected services were tested at the third phase, the reflection stage in order to find possible problems and to improve concepts further. We created storyboards (Attachment 5) to visualise the service use cases and results in action. After that the service concepts were tested in a real environment to gain more feedback from the possible customers of the service. (Stickdorn 2010, 130 - 133).

The goal of this study was to innovate possible forest therapy service concepts for European tourists. The development project was commissioned by Metsähallitus and Laurea. Mutually the researchers were very interested about the topic. Laurea University of applied science and Metsähallitus had formally executed qualitative feasibility studies about the topic, which have had good acceptance and improved the possibilities of researchers to execute a Master's Thesis of the topic with these stakeholders. Formal feasibility studies have shown, that Finnish tourism industry has good prerequisites to create new wellness travel service concepts for international tourists. According to this, the researchers saw the subject as a good topic also for this development project. According to the formal studies of the topic can be said, that pilot case studies were executed. This relates to good preparation of collection of the material for the development project. (Yin 2003, 57.) However, the most important criterion for choosing this topic for the development project was the fact, that Finnish travel industry has a shared aspiration to create a strategic competitive advantage in wellness tourism, which creates outstanding basis for a design process of forest therapy service concepts.

3.3 Description of methods

The material of this development project was collected with following methods and service design tools: literature review, specialist interview, probes and theme interview methods. Interviewing the specialists of the related fields gives an insight and better understanding of the context for the designers quickly (Moritz 2005, 190). Probes were used as a tool to gain understanding of users' experiences and also to get fruitful starting points for the theme interviews (Mattelmäki 2006, 153). Interviews as methods of collecting the material have, according to Yin (2003, 86), strengths and weaknesses. The strength of interviews is that they are focusing straight to the topic of a case study and offer a possibility to do causal conclusions. The weaknesses, however, are the obliqueness of material and answers, caused by badly composed questions, inaccuracy of answers, caused by their erroneous transcribing and reflexivity, when an interviewee answers what an interviewer wants to hear. (Yin 2003, 86.) In this development project the interviews were the most suitable method for the collection of material, because a design process of a service concept cannot be researched from documents of any company. Interviews are a way to describe a picture from the life of an interviewee, as much as it is related to interpretation of the consequence of a described phenomenon (Kvale 1996, 6).

Koskinen, Alasuutari & Peltonen (2005, 104-105) divide interviews to three different types by their prescriptiveness. The first type is a structured interview. It is normally referred to a survey interview, which questions, their order of presentation and a researcher places answering alternatives. Another type of an interview is a half structured interview, which is also known as theme interview. This type of an interview gives more freedom to an interviewee. A researcher places the questions, but an interviewee answers them with own words and may sometimes even suggest own questions. A half structured interview does not require a slavish tailing of order of the questions. It is the most used method of collecting the material in qualitative research of sciences of business economics and social sciences. The third type of an interview is a deep interview. It tries to remain the influence of an interviewer as low as possible. An interviewee answers the questions with own words and even defines them by mirroring own way of thinking. The mission of an interviewer is to understand and support the free progression of the mind of an interviewee. The researchers chose to use a half structured interview in this development project in order to give the interviewees a possibility to speak freely about the topics. This gave much more information of customers' desires and needs for the service design process.

Before the theme interviews of the potential customers of the services, five different specialists were interviewed in order to get a general view about the topic. The chosen specialist

interviewees were Sirpa Eronen, a director of Leisure and Conference from Siuntion hyvinvointikeskus, Eeva Karjalainen, a research Advisor from Metla, Lasse Loven, a development Director of Metsähallitus, Tytti Tulkki-Nenonen, a doctor of Industrial Health from Mehiläinen Oyj and Juha Viitala, a development Director from Mandala Travel company.

The specialist interviews and theme interviews were used in this development project as a method of collecting the material also because of the need of collecting as much information of the examined phenomenon as possible. At the same time there was a desire to give an interviewee a free possibility to bring forth matters related to the phenomenon. A clear advantage of an interview, however, compared to other ways of collecting the material is its flexibility depending on a situation and an interviewee (Hirsjärvi et al. 2001, 192). A half structured theme interview was used as a type of an interview (Attachment 1), because it gives an interviewee a possibility to give wider answers. Open and partly structured questions were able to verify, that there exists a kind of body for the interview and every interviewee were asked the same questions. The answers of the interviews are also easier to compare, when they follow the same structure.

The theme interviewees for the development project were chosen around the Europe. The main reasons for the selection was their potential possibility to be customers of a Finnish wellbeing travel product and that they were picked widely from different parts of Europe. From the basis of these criteria, six different international interviewees were selected as research targets of this project. These individuals were all living in large cities around Europe and were employed in different kinds of companies in different industries. In the interviews of development director of Metsähallitus, Lasse Loven (2011), the researchers were mapping the most potential target groups. These factors were also taken into account in the selection process of interviewees.

The theme interviews included three different kinds of tasks for the interviewees. The first task were probes (Attachment 2), which were sent to interviewees by e-mail one week before the actual interview. Probes were designed in order to examine pleasant and unpleasant incidents of interviewee's typical weekday. This information was collected in order to receive material, which would help us understand the typical factors of anxiety and pleasure of the target group. This material can be used in the design process in order to highlight the pleasant factors in service concepts. Anxiety factors relates to the factors, which should be avoided in new services and helps us understand the issues, which should be left behind during the execution of a well-being service. The second section of the probes was to design ten commandments of a nature explorer. This section increased our understanding of the important functional factors of the service. We received information about the desired soundscape, visual functions and common practical factors, as an example waste management and rou-

tines of the service. The probes included also a photographing section. The interviewees were about to take a photograph of an object related to nature, which is significant delightful. This section gave us material about the visual wellness factors, which should be included to the process of the service.

The themes of the theme interviews were designed based on the theory and the theory for its part answered to the placed partial research questions. The themes were placed in order to receive the most important information, but the meaning was also to let the interviewees speak freely for getting as much information as possible about the desires of the target group. The first theme (Attachment 1) clarified the previous nature experiences of the interviewees. The interviewees were asked to describe these experiences and their best factors. These answers gave us information about the things, which are possibly wanted to experience again. The second two themes were placed to get knowledge about desired well-being factors and factors of a successful ecotourism services. With these questions we wanted to connect the theory's wellness factors to the desired factors of the target group. By doing this, we could receive information about most critical and desirable wellness factors, which we should add to the services. The theme number four recommended the interviewees to propose the sports activities, which they would like to experience during the service. According to Tyrväinen & Koskela (2009, 59), a natural environment attracts to outdoor activities and staying in nature. This in turn helps to recover from stress and effects positively for mental and physical health. Active exercise and staying in nature both have immediate health impacts, conscious or unconscious. This question gave us suggestions about the most desirable events, which could be added to the services.

The meaning of nature was the topic of the theme number five. According to Korpela (2001, 21), a forest as an operational environment offers diverse possibilities for expedition of comprehensive wellness and reaching of aesthetic experience. By this question we tried to find out the importance and desirability of nature for the target group, in order to perceive the usage of nature as an operational environment of the service. The benefits that all living organisms obtain from nature are called ecosystem services (Chivian & Bernstein 2008, 75). The question number six collected information about the importance of these services for the interviewees. By receiving this information, we were able to characterize these services to the order of importance, in order to use the knowledge of the most important services in the design process. Wellness tourism includes services or products, which stimulates or increases the well-being of human body, mind or soul (Suontausta & Tyni 2005, 42). In the questions seven and eight we wanted to collect information about the best and the worst service situations, which the interviewees were experienced. This knowledge was about to use in the design process in order to minimize the possibilities of bad service experiences and increase the possibility of pleasant experiences. The questions nine and ten were common inquiries about

the equipment and facilities a service provider should provide while experiencing an ecotourism service. This helped us understand the needs of the target group in the design process of sports- and functional-related factors of the service.

The task number two of the theme interview was designed to increase the understanding of the common values of the target group related to ecotourism services. The interviewees were given ten different claims, which they were asked to set to the numerical order of importance.

The theme interviews were executed as individual interviews. The interviewees were contacted by phone and e-mail and the interviews were executed during April-May 2011. The interviews lasted from half hours to two hours and the interviewees were informed beforehand about the estimated duration. The interviews were executed in English, because whole development project will be done with English language and there are many different nationalities involved. The interviewees were given a body of the interview beforehand in order to help the preparation to the interview. The interviews were also audio-recorded with the permission of the interviewees. The interviewees were beforehand informed about the purposes of the interviews and reminded, that all the information is confidential. These things were also told in recruiting e-mails, where they were asked to join the interviews. The interviewees were given a possibility to decide about the location of the interview. The interview situations were very pleasant and spontaneous. They were easy to transcribe afterwards from the recordings. Notes were also made about the most important matters and constructs of the interviews in order to save the material, if something would go wrong with the recordings.

The affinity diagrams (Attachment 4) were used in creation phase as a tool to re-organise the collected material and insights from the first phase. All the collected data were broken into pieces for sticky notes and arranged into several broad categories. Hypothetical archetypes, personas (Attachment 3), were created according to insights from the target group and specialist interviews. Personas helped us to remember the motivations, needs and wants of the potential customer throughout the design process. Storyboards (Attachment 5) were used as a tool to demonstrate the service use cases visually. The service concepts were also blueprinted (Attachment 6-7) in order to model whole service processes and underlying organizational structure and insights.

3.4 The analysis of material

The analysis of material consists of going through the material, classification, tabulation and recombining of qualitative and quantitative material in order to examine the original settlement of the question of the development project. In this development project, the material was classified and tabulated by using an affinity diagram (Attachment 4). The analysis of ma-

terial of a case study is seen particularly challenging, because the strategies and techniques are not properly defined (Yin 2003, 109.) the analysis of a qualitative research aspires to create clarity to the material and thus create new knowledge. The material is tried to condense in order to retain the information it includes. The purpose is to increase the value of the information by organizing scattered material clear and reasonable. (Eskola & Suoranta 1998, 138.) According to Eskola & Suoranta (1998, 151), there are at least three different ways to proceed from interview material to an analysis. The first way is to dismantle the material, which is done by transcribing the material to text and proceed straight to an analysis by trusting to the intuition of the researcher. Another way is to code the material after dismantling and proceed straight to an analysis. The third way is to connect dismantling and coding and move forward to an analysis of the material.

In this development project the interview material was dismantled by transcribing the recorded material to text as accurately as possible immediately after the interviews. After this the information was organized. The transcribed materials were read through many times in order to divide important key matters and themes. Organizing the material was quite easy, because the body of the interview was divided to themes beforehand, according to the subjects of the partial questions of the research. This functioned as a starting point for an actual processing of the themes and Affinity Diagram (Eskola & Suoranta 1998, 152.) However, the interviewees were speaking quite freely, which brought forth some new themes in contact with the questions.

When the material was organized, the researchers were ready to start the analysis of the material. There are a large amount of different types of ways to analyse a material of a qualitative material and new ways are continuously developed. The most typical ways to analyse are, according to Eskola and Suoranta (1998, 161), quantification, theme processing, typing, and differentiation of content, discourse analysis, and discussion analysis. In this development project the themes of the material was processed, different themes were raised up, which illuminated the partial questions of the development project. Also the Affinity Diagram was used (Attachment 4). In the analysis of the material typing was also exploited in order to search similarities and variant answers from the material (Eskola & Suoranta 1998, 182).

3.5 The reliability of development project

The reliability and validity of a research should always be evaluated during a research process in order to increase the quality of a research (Koskinen et al. 2005, 253). While evaluating a qualitative research, the reliability of the research process is usually discussed (Eskola & Suoranta 1998, 211). The reliability of a qualitative research is increased by a number of factors. A pedantic and truthful recitation of a researcher about the different phases of the research process is a good way to increase the reliability (Hirsjärvi et al. 2001, 214).

According to Yin (2003), there are four most usual tests to indicate the quality of an empirical research and hence also the quality of a case study. These tests are construct validity, internal validity, external validity and reliability. (Yin 2003, 33-34.) A research can be noticed to be valid when an indicator or method of measuring is measuring exactly the things they should measure (Hirsjärvi et al. 2001, 213). The validity can be evaluated through three different points of view, which are construct validity, internal validity and external validity. Construct validity is referring to selection of appropriate indicators, which applies to the context. Internal validity, which is only used in causal and explanatory research, is referring to authenticating causal connections. External validity is referring to generalisation of research results. (Yin 2003, 34.)

This development project enables the examination of construct validity and external validity. Because this development project is not a causal or explanatory project, internal validity cannot be tested. Construct validity can be increased by many different ways, which are the use of many sources of material, a chain of evidence and promulgating the draft of the case study on the essential interviewees (Yin 2003, 34-36). The construct validity of the research is decreased, because of researcher's reduced possibility to use more than one source of material, the interviews. There are very small amount of public material of researches of forest therapy, which can be exploited by the researcher. However, the interviewees represented many different nationalities and opinions - different age groups and genders - that enabled the acquiring of different material while the interviewees were answering the questions based on their own point of view. In this development project the purpose has also been to maintain a chain of evidence, so called red thread, which proceeds logically from the deployment of the research question, through the theory to the case study and finally to the conclusions. The case study was also delivered to the author of this development project, Metsähallitus, for reading. This increased the construct validity of the development project for its part.

External validity refers to generalisation of the research results outside the case study. Generalisation is observed to be problematic in qualitative research - especially under case studies, which examines only one particular case. (Yin 2003, 37.) Qualitative research is often criticized because of the small amounts of observations, which cannot be generalised dependably (Koskinen et al. 2005, 263). Hence the results of this development project are difficult to generalise to other service design processes concerning forest therapy, because the research examines only one relation. However, the theory of this development project is aspired to compose in a way, which can be similarly accomplished by another researcher in another case study, enabling the comparison of the results of the research to the results of

this development project.

Reliability means that the implementation of a research can be repeated when necessary in order to receive the same results and conclusions. The aim of reliability is to minimize the errors and distortions of the research. Hence the process of a research should be documented as accurately as possible. (Yin 2003, 37-38.) Consequently this can also be described as consistency of material. Even though a material would not be valid, it can be reliable. But a material cannot be valid, if it is not reliable. (Koskinen et al. 2005, 255.) Objectivity can be understood in three different ways. First of all, objectivity can be seen as trustworthiness of information. In that case the information is verified and controlled and personal prejudices are not influencing to it. Secondly, the material should be able to be tested and re-produced in a way, that the observations of other researchers produce same material about the same topic. Thirdly, objectivity can also mean the reflecting of a character of a researched object by letting the object to speak and illuminating its real nature (Kvale 1996, 64-65.)

This development project tries to reach all different forms of objectivity in order to reach the highest possible state of reliability. The trustworthiness of the information is aspired to ensure by preparing carefully to the collection of the material. The material was also aspired to produce by trying to keep the influence of the researcher as low as possible in the interview situations. This was executed by avoiding loaded questions. The recordings of the interviews also succeeded, which minimized the influences of recordings to the answers of the interviewees. The character of the examined object was aspired to reflect by letting the interviewees to answer the questions freely.

Even though the validity of the research is limited by the problems in generalising the case study, which handles only one kind of case, the reliability of the research is tried to increase in many different ways. Even though the research could have been executed also in other ways, the methods of the research answer quite well to the research questions. The aim of this development project was not to create generalisations about forest therapy, but it aspired to forward the research concerning Finnish wellness travel services, which have been researched quite diminutively so far. The next chapter delves into the case study itself and the results of the development project.

4 Service concepts for Nuuksio national park

In this study, the three iterative stages were used in order to design service concepts around forest therapy: exploration, creation and reflection. The fourth step, implementation phase, was excluded from the study. It is essential to make decisions according to available resources and customer's opinion regarding the process because all the aspects of the service cannot be covered during the service design process. (Stickdorn 2010, 126 - 127.)

4.1 The results of the exploration phase

The goal of the first phase of the service design process is to find out the true motivations, needs and wants of the potential customer. It is also vital to understand the service context and new perspectives. (Stickdorn 2010, 128.) The service design process started with a literature review that helped us to understand the context of the forest therapy services and also the whole service design process better. After that, we contacted the specialists and experts from different fields around forest therapy and interviewed them to gain more insights about the areas of design within a very short time. Interview themes and questions were prepared carefully before an each interview. The expert interviews gave us an inspiration and even a better understanding of the themes discussed than what we expected. Specialists helped us to spot possible problems for the upcoming services and also solutions for them (Moritz 2005, 190). We interviewed the following six experts: Lasse Loven of Metsähallitus, Tytti Tulkki-Nenonen of Mehiläinen Oyj, Maria Wendell of Solvalla, Sirpa Eronen of Siuntion Hyvinvointikeskus, Juha Viitala of Mandala Travel Oy and Eeva Karjalainen of Metsäntutkimuslaitos.

To collect user data, we used one of the most well known innovative method, probing (Hämäläinen, Vilkkä & Miettinen 2011, 65). Probe kits (Attachment 2) were designed based on the literature review, specialist interviews and this study's targets and goals. Packages with instructions were sent to six selected persons of the target group via email. The purpose of the probes was to find out users' beliefs, needs and values related to service. It was also a good way for the users to participate into a service design process although most of them were abroad. Probes inspired us to innovate new services and they were also a fertile background for the target group interviews.

A face-to-face interview is a good way to learn customers' experiences and expectations related to the service (Moritz 2005, 193). To understand customers' needs better, we interviewed six persons of the target group. The atmosphere of the interviews was open and relaxed, which allowed the users to speak freely about their experiences and desires. Interviews were recorded in audio-format and field notes were taken during the interview situations. All interviews were transcribed and analysed afterwards.

At the end of the interview the users were given ten different claims, which they were asked to prioritise to the order of importance. The idea behind these motivation cards was to get insights of the most important factors of the service for the users. Nurmi (2001, 21) describes five human senses, the senses of sight, hearing, smell, taste and touch as bio psychological lifelines. Bio psychological lifelines are the factors that connect human beings with nature. The claims included elements of these factors and the objective of this task was to put these

potential factors of the new services in the order of importance. Figure 8 introduces the results of the task. Each claim is shown with its relative importance across all interviewees.



Figure 7: The importance of the claims of task 2

Based on the insights from the first phase, we created two archetypes to represent our target group (Van Dijk, Raijmakers & Kelly 2010, 178). Personas (Attachment 3) were used throughout the service design process to remind what the customer of the service wants and needs.

4.2 The results of the creation phase

At the second stage, the creation phase, new service ideas and concepts were created. We used an affinity diagram as a tool to organise and gather ideas and insights from the previous phase (Moritz 2005, 202). Insights from the probes and interviews were broken into pieces for sticky notes, arranged and re-organised into new categories. The idea of the iterative creation process is also to find out the possible problems related to the service from the user's point of view (Hämäläinen, Vilkkä & Miettinen 2011, 75). Users' desired factors for the service were discussed and also best and worse service experiences and reasons for them were taken into account when designing new services. According to an interview with Eronen (2011), people who search for forest therapy services are mostly searching for peace, relaxation, peace of mind and stress reduction. Among these factors, the interviewees stated the importance of different kinds of sport activities and adding knowledge of nature and its biodiversity. Also social aspects of the service was highly valued.

Interviewed customers valued the natural sounds and visual factors of the forest and mental and physical well-being effects. Sharing the experience with family or friends was considered as an essential feature of a service. The customers' best service experiences consisted of several different factors. All the interviewed customers agreed that service experience should be personal and fulfil their expectations. It is essential that the service provider understand their customers' needs. In worst cases the service provider had been unresponsive and rude, which caused disappointments. Flexibility and commitment are the service factors that customers valued the most.

Sustainable travelling was discussed in interviews. Most of the interviewees said that this issue was more and more important to them nowadays. According to an interview with Loven, tourists around the world are increasingly paying attention to carbon strain caused by travelling. Forms of ecotourism already exist, but if reaching the destination causes enormous carbon strains, there is a contradiction. Forests are swallowing carbon. The more we have forests the less there is carbon. This makes a big difference between ecosystems of different countries. The difficult mission of Finnish ecotourism and service providers is to convince tourists about carbon neutrality of Finnish ecotourism. When executed, it could be a huge competitive advantage for our nation.

There tends to be a need for forest therapy services, especially targeted to people who are living in a city. According to an interview with a doctor of industrial health, Tytti Tulkki-Nenonen, the most usual diseases today are heart and blood vessel diseases. These diseases have become enormously more common during the last decades. As an example, heart infarct was before commonly known as "a disease of directors", because it did not exist in the countryside. Both of these diseases are related to noisy, overloading and stressing environment. These factors are present in every modern workplace, because of continuous compulsive reaching for effectiveness and growth.

Interviews revealed that the customers are willing to do some sport activities in a forest. Several service ideas around that were created also because an exercise has positive health effects for human beings. For example, diabetes has generalized with an alarming speed. Tulkki-Nenonen emphasizes the number of diagnosed diabetes patients is doubled in every fifth year. The most important way to control body weight - a proven cause of diabetes - is rectification of exercise. Continuous exercise is almost impossible to practise in cities, in the middle of traffic lights. Different kinds of allergies have also become dangerously more common. Researchers have compared children from cities to children from countryside and found out that children from cities have a multiple risk to become ill. As an example, when researchers have compared Finnish and Russian children, they have come to a conclusion that allergies are an almost unknown disease among Russian children. The reason for this is the

urbanization of the Finnish countryside. The closer to nature a child grows, the smaller is the risk of different allergies. Karjalainen emphasizes that forest therapy is not meant to be actual therapy, but has been shown to improve mental and physical health.

Recreation was discussed a lot in the interviews. According to Viitala, most of the interviewees highlighted that it was the wanted outcome of the forest therapy service. The time spent in nature and forests is much better way to search for well-being than mental pharmaceuticals. The forests are offering relaxation and positive feelings, which can't be reached in cities. Humans are natural beings and have a genetically driven attraction to return back to their roots. Natural environment offers proven therapeutic influences and is good for the health of a human being. Also, cases of mental illnesses have increased up to a level where they have become the biggest reason for premature retirement during the past ten years. Every one of us suffers from different forms of stress every now and then, in the middle of contradictions of work and family life. Depression can be triggered by a prolonged exposure to stress. An indispensable resource of illness prevention is rambling in nature. (Tulikki-Nenonen 2011.)

Among the several service ideas, we selected two concepts for further improving; guided trekking tour and forest triathlon. Eronen emphasizes that only the staying in a forest reassures and reduces stress levels. Tulikki-Nenonen also states the importance of walking and hiking in nature and forests for everybody. According to interviewees, taking a walk in a forest was valued and associated with positive emotions. The consequence of nature for human health is indispensable and more powerful than many treatments with pharmaceuticals. Because of this, doctors around the world are prescribing increasingly more recipes of physical education, in other words written instructions for doing sport activities in nature.

4.3 The results of the reflection phase

At the reflection phase, the selected service concepts, guided trekking tour and forest triathlon, were tested to improve ideas further. To demonstrate sequences of service use cases, the storyboards (Attachment 5) of the service concepts were created. Storyboards include the visualisation of the triggers for the services, service use cases in action and service results in action. By visualising the service use cases, the possible problems that customers may face during the service experience usually create new solutions and innovations (Vaahtojärvi 2011, 150). Storyboards should not be used alone because although it is a simple way to visualise the service concept, it can be easily understood in different ways and a risk of misunderstanding exists (Moritz 2005, 230). Prototyping and testing the selected service concepts in real environment is vital (Stickdorn 2010, 123 - 133). Therefore service concepts were tested in a forest with two persons of the target group. Feedback from the customers helped to de-

sign the service iteratively in a more user-centred approach.

The guided trekking tour service is targeted for people who are interested in recreation and understanding nature better. The aim of the service is to provide a relaxing experience and education by connecting urbanised customers to nature. Service provides positive health impacts both for the customer and also for the environment.

The guided trekking tour experience starts by enjoying the forest landscape and its colours, smells, voices and silence. Several concrete tasks are done to support biodiversity for example planting the trees to old stock roads to prevent erosion and cleaning the air, soil improvement to create better water filtering and planting the undergrowth to increase biodiversity. These tasks are aiming to educate the customers to value and understand the natural ecosystem services and their effects. Part of the lunch food and fuel is picked from the trekking route to deepen the understanding of the benefits that nature provides. At the end of the tour there is time to enjoy about the offering of the forest by eating the fresh hand picked food, while enjoying social intercourse with other customers. Recreation and relaxing affects of the service increase customers' mental well-being and physical education improves the physical performance.

Forest triathlon service concept is designed for customers who want to increase their mental and physical well-being by doing sport activities. It is aiming to inspire urbanised customers to spend time in nature and simultaneously learn basic things about nature and its well-being resources.

The service includes a route of sport activities in different kinds of natural environments. These activities are rock climbing and dismounting by using outdoor rocks, paddling in ponds and trekking in a forest. Forest triathlon offers an opportunity to enjoy and learn about the different possibilities that nature provides. The purpose of the service is to produce well-being factors of forest therapy and simultaneously re-connect them with nature. At the end of the tour there is time to enjoy barbequing and experience the beauty and the silence of nature.

4.4 The refinement of collected results to service design concepts

As an outcome of the contextual interviews the most important features of the ecotourism services were received. Desired factors of the service are different kinds of activities of physical education and also sharing the experiences with a group was highlighted. The visual and physical factors were highly appreciated, such as beauty, cleanliness, colours, smells and water systems. Also the following mental factors of the service were desired: relaxation, good

feeling and balance for the working days.

According to interviewees the good service experience consists of personal service, which means that customer's needs and desires are taken into account all the time during the service experience. They also valued a service that fulfils and even exceeds the customer's expectations. Unsatisfactory service was experienced as inflexible, careless and uncommitted behaviour of the service provider. Other negative factors mentioned were rudeness and slowness.

It is vital to define and prioritise the goals and requirements for the service to create a common direction for it. Design drivers can be considered as a guideline for the service design process. (Mattelmäki & Vaajakallio 2011, 97.) Based on the insights from the literature review, expert and user interviews the following design drivers were created for the ecotourism services:

Design drivers for guided trekking tour in Nuuksio

1. To create mental well-being
2. To create physical well-being
3. To share deepen understanding about biodiversity
4. To educate customers to increase biodiversity
5. To support customers' social life by sharing the experiences

Design drivers for Forest triathlon in Nuuksio

1. To create mental well-being
2. To create physical well-being
3. To inspire customers to spend time in nature
4. To offer inspiring environments for sport activities
5. To support customers' social life by acting together

4.5 Service descriptions

In these service descriptions the designed services have been described as detailed as possible in order to obtain a better understanding of the service concepts to a service provider. Both of these services start with service marketing, which is concentrated to different kinds of medias and publications, according to a marketing strategy of a service provider. A customer orders a service from a website of a service provider or by calling straight to service provider's call-center. An employee books the reservation to the financial management program

and starts to prepare the implementation of the service, which includes route planning, reservation of a guide, planning of menus, including special diets and reservation of different kinds of accessories.

4.5.1 Guided trekking tour

The first service entirety, Guided Trekking Tour, is executed in Nuuksio national park. A group is meeting each other in Elohoivi parking lot, located in a village of Tervalampi, district of Vihti. Customers are arriving either with organized transports or with own ride. Formally ordered accessories are given to the customers, but own gear can also be used. A guide keeps an information meeting, telling the group general information about nature, Nuuksio national park and the content of upcoming day. Guided trekking tour starts with a trek, which is directed from Tervalampi towards Haukkalampi. The route proceeds the first few kilometres along Klassarinkierros, a guided trekking route of Nuuksio, continuing along an old stock road towards trekking routes of Haukkalampi. The customers may explore and enjoy nature with all senses and feel forest therapy influencing their bodies during the journey. While trekking, the guide directs the route and tells the group more deeply about forest therapy, the national park and the places around. As experiencing the silence is a very important factor of forest therapy, the guide leaves also quiet moments in order to reach the silence and nature's own voices. The purpose of the service is to enable the customers to exercise, support nature's functions, enjoy forest therapy, familiarize with nature's ecosystem services and understanding the functions of ecosystem services.

The first mission of the route is to plant seedlings of trees, which the guide has brought on the spot. The seedlings are about to be planted to old stock roads and to districts with thin vegetation. The guide is telling the group about ecosystem services and how planting new trees and good condition of old forests is affecting to erosion, capability to store carbon dioxide and air filtering during the mission (regulating services). Furthermore planting trees to old stock road is minimizing the human-caused deviation in a natural forest. Erosion (detrition of soil affected by running water and wind) can be avoided with soil improvement or planting undergrowth. Therefore the next mission is to improve the soil. The material used in soil improvement is sand, clay and peat, which the service provider has brought to the spot earlier. The guide is telling about the influences of the work for the soil during the mission; its functionality as a growing platform and the ability to filter water (supporting services). Organic material is added to a mineral soil, which deepens the mould layer, improves the structure of growing platform and enlivens its microorganism functions. Sand soil is not able to stock water or nutrients, but is very gravid. It is improved by adding clay and decomposed peat. Silt soil is easily condensable and its microorganism functions are usually weak. It is improved by adding sand and decomposed peat. Clay soil includes a number of nutrients, but is easily

hardening and condensable and cold. It is also improved by adding sand and decomposed peat. Peat soil, which is commonly existed in Nuuksio district, stores satisfyingly nutrients and water and stays airy in places, where it is not downtrodden. However, raw peat is quickly decomposed and bonds nitrogen from the growing platform in the decomposing process. Peat soil is improved by adding a mixture of clay and sand to the ground.

The third mission is to plant undergrowth and covering plants to districts, where it has disappeared or abandoned by affections of erosion, water or human functions. The consequence of undergrowth is significant in a nutrition economy of a forest. Undergrowth, which consists of twigs, bryophytes and lichens, is often well developed and thick in Finnish forests, because light and humidity is sufficient until the bottom of a forest. However, in order to conserve the biodiversity, it also has to be maintained and improved if needed. The guide is telling about biodiversity and the importance of functioning soil and undergrowth within this entirety (supporting services). The fourth mission is to continue trekking, but simultaneously pick food and fuel from nature (provisioning services). The group picks fuel (fallen trees, dry twigs and barks) and seasons foodstuff (berries, mushrooms, plants and herbs) on the way. Drinking water is filled up from springs. The guide is telling the group about the benefits offered by ecosystem services during the collection. The trek continues through Haukkalampi and Kattila, whence the group returns to the fireplace of Klassarinkierros in order to prepare food. Service provider has brought the rest of the cooking materials and utensils during the trek, and the group is ready for preparing the food immediately. The campfire is lighted and kept up with collected fuel. The raw materials of the food are organic and local food, and self-picked ingredients. The guide helps the customers in food preparation process and tells simultaneously deeper knowledge about the day's incidents, forest therapy and benefits for human health, which are provided by nature. There is a break after eating, which can be used for enjoying and experiencing nature, or even taking a nap on bryophyte.

The group continues the trek towards the meeting place in Tervalampi after eating. During the rest of the trip, the customers can enjoy nature with all senses (cultural services). The guide tells about obtained influences of forest therapy during the trek. The group is separating at the meeting place and starts the journey back either with organized transports or with own ride. The service provider enters the transaction to a financial management system and CRM system and produces service invoices to the customers. Guided trekking tour service has been described in guided trekking tour blueprint (Attachment 6).

4.5.2 Forest triathlon

Forest triathlon offers an opportunity to enjoy and learn about the different possibilities that nature provides. The purpose of the service is to produce well-being factors of forest therapy and simultaneously re-connect them with nature. At the end of the tour there is time to enjoy barbequing and experience the beauty and the silence of nature. Also this service is executed in Nuuksio national park. A group is meeting each other in Elohoivi parking lot, located in a village of Tervalampi, district of Vihti. Customers are arriving either with organized transports or with own ride. Formally ordered accessories are given to the customers, but own gear can also be used. A guide keeps an information meeting, telling the group general information about nature, Nuuksio national park and the content of upcoming day. Forest triathlon begins with a trek on an old stock road and is directed from Tervalampi towards the lake Liukoi. The customers are able to enjoy and experience nature with all senses and feel forest therapy affecting their bodies. The guide navigates the route and tells eager customers more deeply about forest therapy, national park and places by the route. As experiencing the silence is a very important factor of forest therapy, the guide leaves also quiet moments in order to reach the silence and nature's own voices. Forest triathlon service is designed for customers who want to increase their mental and physical well-being by doing sport activities. It is aiming to inspire urbanised customers to spend time in nature and simultaneously learn basic things about nature and its well-being resources.

On the shore of Liukoi there are abrupt, high and upright rock walls. The guide prepares climbing ropes and other accessories and the customers may start to climb the walls under supervision. When the whole group has reached the top of the rock, dismounting. The group members dismount from the wall one by one to the ground. Afterwards the group keeps a small summary about the physical activity and exercise, while the guide unwraps the climbing ropes from the wall. The trek continues towards Kolmoislammit lakes, which are three small lakes located in southwest Nuuksio. The guide tells the group about positive health effects of physical education and nature for a human body and well-being. When reaching Kolmoislammit, the group gathers to canoes, which a service provider has brought to the spot. Every customer and the guide have an own canoe. The group starts paddling through the first lake. After reaching the opposite shore, everybody picks up the canoe and carries it to the shore of the next lake. The same exercise is repeated until reaching the final shore of the last lake. During the event the customers are having physical education and simultaneously are able to enjoy and experience nature and water elements with all senses. After finishing the exercise, the group gathers to the last shore and lifts the canoes to a trailer, which have been brought to the spot by a service provider. The program continues with a trek through Haukkalampi and Kattila, whence the group returns to the fireplace of Klassarinkierros in order to prepare food. Service provider has brought the cooking materials and utensils during the trek, and the

group is ready for preparing the food immediately. The campfire is lighted and kept up with firewood, taken from a rentable woodshed of Metsähallitus. The raw materials of the food are organic and local food. The guide helps the customers in food preparation process and tells simultaneously deeper knowledge about the day's incidents, forest therapy and benefits for human health, which are provided by nature. There is a break after eating, which can be used for enjoying and experiencing nature, or even taking a nap on bryophyte.

The group continues the trek towards the meeting place in Tervalampi after eating. During the rest of the trip, the customers can enjoy nature with all senses. The guide tells about obtained influences of forest therapy during the trek. The group is separating at the meeting place and starts the journey back either with organized transports or with own ride. The service provider enters the transaction to a financial management system and CRM system and produces service invoices to the customers. Forest triathlon service has been described in guided forest triathlon blueprint (Attachment 7).

5 Conclusions and discussion

The objective of this development project was to create design drivers and service concepts for forest therapy services for the use of Metsähallitus, the commissioner of this design project. The meaning was to design well-being design drivers and service concepts, which answer to the wellness needs of the potential European target groups by offering physical and mental recreation, relaxation, natural experiences and education. By designing these kinds of service concepts, the purpose was to connect urbanized human beings with nature in order to increase and maintain their well-being. These concepts were designed considering also the well-being of nature by designing service concepts, which have positive health impacts also for the environment. Researchers have tried to ensure the usability and desirability of the services for the customers and the efficiency and individuality for the service providers by using service design tools. The objectives of this development project were reached by thoughtful engrossing to the theoretical background of the subject, by interviewing six representatives of the target group around the Europe and by developing design drivers and service concepts by using service design methods, based on the received material about what kind of services and wellness factors the target group would need to experience forest therapy.

The current state of nature and common human health is unpleasant and there is a need to spread knowledge about the environment and the ecosystem services it is providing. When working properly, nature and its biodiversity offers many benefits, called ecosystem services. These services include among other things food, medicine, refinement of water systems and toxins, and factors, which affect straight to the well-being of human beings, such as relaxation and recreation. (Chivian & Bernstein 2008, 75.) Customers of the designed services were

given a possibility to benefit from these factors by including them to both of the designed services. The interviewees were asked to prioritize the most important ecosystem services, which nature is offering them. As a result a wide variety of these services were received. These desirable ecosystem services, based on the theory and the interviews, were included to the designed ecotourism service concepts in order to experience their well-being factors and to share knowledge about their importance for all the life on the Earth. The service concepts include among others a task to expedite the production of ecosystem services. This for its part increases the well-being of nature and motivates human beings to co-operate with nature in order to receive comprehensive well-being for both human beings and the environment. People all over the world are losing touch with nature, which is leading to decrease of the awareness of the environment, biodiversity and its positive health impacts. By spreading this knowledge and designing desirable and effective wellness services, straight impacts for the development of eco-tourism, wellness of nature and well-being of human beings can be discovered. Forests and nature are a significant resource, which expedites the health and well-being of human beings (Tyrväinen & Korpela 2009, 57) Both of the developed service concepts include factors of forest therapy and are leading to well-being of its customers. The services include physical education in forests, which familiarizes the customers to the health-effects of nature. The services are designed to simultaneously share knowledge about the importance of the environment, to produce desirable mental and physical well-being effects and to attract the customers to the usage of sustainable ecotourism services and lifestyle. Both of these services are reaching the placed objective of sharing information and knowledge about nature and its services, while enjoying increasing wellness and an attractive ecotourism journey.

According to an interview with a doctor of industrial health, Tytti Tulkki-Nenonen, polluted air can cause symptoms of asthma and allergies for human beings. Also other kinds of allergies have become dangerously more common. Tulkki-Nenonen told that researchers have compared children from cities to children from countryside and found out a fact, that children from cities have a multiple risk to become ill. As an example, when researchers have compared Finnish and Russian children they have had a result, that allergies are almost unknown disease among Russian children. The reason for this is the urbanization of Finnish countryside. The closer a child grows up to nature the smaller is the risk of different allergies. One answer for this problem is to create ecotourism services, which motivates people to spend more time in cleaner and natural environment. The operational environment of both two designed ecotourism service concepts is a forest. According to the interview with Karjalainen, forest therapy is not meant to be actual therapy but has been shown to improve mental and physical health. Tulkki-Nenonen emphasizes the importance of walking and hiking in nature and forests for everybody. Before something more serious occurs, one has to notice the complimentary help offered by nature. The consequence of nature for human health is

indispensable and more powerful than many treatments with pharmaceuticals. Because of this, doctors around the world are prescribing increasingly more orders of physical education, in other words written instructions for trekking in nature. The new service concepts are executed in a natural and clean environment and include different kinds of forms of physical education. This for its part expedites healthiness and connects the customers of the service with the pure nature. This can lead to a deeper consciousness of the well-being factors of nature and motivate people to spend more time in a healthy environment.

Human beings are living in large cities around the world and suffer from anxiety and different kinds of diseases related to stress and depressing working conditions. According to the interview with Tulkki-Nenonen, cases of mental illnesses have increased to be the biggest reason for premature retirement during past ten years. Depression is getting started during a prolonged being exposed to stress. Also with these occasions, the indispensable resource of prevention is rambling in nature. However, every one of us is suffering for different forms of stress every now and then, in the middle of contradictions of working life and family life. According to Eronen, people who search for forest therapy services are mostly searching for peace, relaxation, peace of mind and stress reducing. The both developed service concepts include diverse well-being- and forest therapy factors, which reduce these kinds of mental symptoms. The unsatisfactory working conditions cause also physical problems. Tulkki-Nenonen emphasizes that diabetes has generalized with an alarming speed. The number of diagnosed diabetes patients is doubled in every fifth year. The most important way to control the weight is rectification of exercise. Continuous, constantly saddling exercise is almost impossible to reach in cities, in the middle of traffic lights.

According to Viitala, the time spent in nature and forests is much better way to search for well-being than mental pharmaceuticals. The forests are offering relaxation and good feelings, that can't be reached in cities. A human being is originating from nature and it has a genetic attraction to return back to its roots. However, natural environment offers proven therapeutic influences and is good for the health of a human being. According to Tulkki-Nenonen, the most usual diseases today are heart- and blood vessel diseases. A common opinion is, that the main cause for this is a lack of physical education. These diseases have become enormously more common during the last decades. As an example, heart infarct was before commonly known as "a disease of directors", because it did not exist on countryside. Both of these diseases are also related to noisy, overloading and stressing environment. These factors are shown in every modern workplace, because of continuous compulsive reaching for effectiveness and growth. A human being tries to control the stress by controlling a surrounding environment, like staying in nature (Tyrväinen et al. 2007, 57). The most valuable benefits of green spaces are the possibilities for outdoor recreation and aesthetic experiences.

Experiencing nature, as its best is an experience, which considers all human senses. A natural experience stimulates the senses, which creates a comprehensive feeling of wellness of body, mind and soul. (Suontausta & Tyni 2005, 245.) The developed services are stimulating all five human senses and are affecting straight to the customers' well-being. Physical education of the services is executed in aesthetic and relaxing environment, which for its part recreates and rehabilitates the customers. The designed services meet the objective of answering to the wellness needs of the potential European target groups by offering physical and mental recreation, relaxation and natural experiences. These experiences are designed to be as attractive as possible by following the most desirable needs for different kinds of factors and forms of physical education of the interviewees in the design process of the service concepts.

Forest therapy can be a competitive edge for the Finnish tourism. Potential demand already exists for the forest therapy service although it is not provided yet in Finland. The volume of the travelling is increasing and its smaller trends come into existence all the time. The widespread interest of ecotourism is increasing. At the same time the trend of comprehensive tourism is growing and different sub trends are born continuously. Because the liquidity of the tourists is increasing, the potential for the demand of different services is increasing. When the demand meets the supply, it is really important to create a good mechanism for desirable discovery and accessibility for the service. The demand of ecotourism is increasing rapidly, which results partly from the common indisposition of human beings. Exhausted people are not searching for lively city- or beach holidays anymore. They rather choose a natural, relaxing and recreating environment as their holiday destination. According to Loven, tourists around the world are increasingly paying attention to carbon strain caused by travelling. Some of the ecotourism is only creating visualizations of ecological travelling, but if reaching the destination causes enormous carbon strains, there is a contradiction. Forests are swallowing carbon. The more we have forests the less there is carbon. This makes a big difference between ecosystems of different countries. Another reason for the increasing demand of carbon neutral ecotourism services is the increased knowledge of carbon strain. The demand of forest therapy-based ecotourism services is correlating straight to an increasing amount of natural forests. The increased amount of these forests is neutralizing the carbon strain of the flights, even when traveling from foreign countries. This creates Finnish ecotourism services carbon neutral. The sustainable entirety combined with the exoticism of Finnish forests creates us desirable framework for designing and executing competitive ecotourism services for European tourism markets. A succeeded execution of an ecotourism service can also increase the conservation of biodiversity and expedite the local economical welfare in Finnish communities.

Viitala describes a successful ecotourism service as a service, which includes a wide variety of wellness factors, connects the customer with nature, adds knowledge about the environment and its biodiversity and services, and produces a feeling of a successful holiday. The output of

this development project was two different kinds of ecotourism service concepts, which can be developed into pilot services in Nuuksio national park. As a conclusion can be noticed that human beings are commonly suffering from the mental depression and exhaustion, caused by the unpleasant state of the world and inconvenient working conditions. Physical degradation is increasing due to decreased amount spare time, office work and lack of physical education. The integration of nature-based well-being factors and the knowledge about the environment and its benefits for the human health is a complete foundation for the designed services. The contents of these services are designed by using the conclusions of the contextual interviews of the target group, taking into account their necessities and desires. It can be noticed, that these service concepts are diverse and professional foundations for future development project related to turning them into the pilot services.

5.1 Evaluation of the output and the process

The topic of this thesis was remarkably interesting, although it also included some problems. Forest therapy is a rather new phenomenon and it has been mostly researched in Japan. Consequently it was really difficult to find reasonable and scientific material of it. The research results of forest therapy studies were mostly published in Japanese language, which made the collection of the material even more difficult. However, the researchers managed to collect a satisfying amount of material regarding to the forest therapy in order to create an informative amount of knowledge for the theoretical framework. If the collection of material had been easier, the theoretical framework related to well-being factors of forest therapy would have been more comprehensive. Even though the difficulties in finding this material, the researchers are satisfied to the entirety of theoretical background.

The next challenge was faced during the collection of material about the well-being factors and ecosystem services of nature. Almost all the literature of these topics was located in the libraries of medical universities, where the researchers had no access. The connection between well-being factors of nature and its influences for the human health was also difficult to execute. The amount of scientific material about the topic was almost impossible to discover. The researchers managed to involve a doctor of industrial health to the process for deepen our understanding about the topic though. The process became more difficult after realizing that the usage of inspirational interviews was not allowed in theoretical framework. However, with intensive searching work, the researchers were able to find a satisfactory amount of material; literature and medical reports related to the topic.

The easiest part of collecting the material was the search for information about tourism and its sub forms; ecotourism, sustainable tourism and wellness tourism. The supply of the material was enormously wide and diverse. Even though service design is also a rather new phe-

nomenon, the researchers were able to find an advisable and comprehensive entirety of material regarding to it. Service design was also a familiar phenomenon for the researchers, as it had been the main topic of whole degree programme. As a conclusion can be noticed, that through an intensive and tough search works for the material, the researchers managed to create a theoretical framework, which was an informative, thoughtful and comprehensive foundation for the rest of the design process.

The interviewing process, the contextual interviews was a highly productive and interesting process. The researchers already had a thoughtful understanding about the theoretical framework and the challenging mission was to connect the factors of the theory with the needs and desires of the target group. The target group was chosen from different parts of the Europe. The number of recruited interviewees was six. If the amount of them had been greater, more multifaceted results would have been reached. The first phase of the interview process was the probes. The interviewees were sent the probes in order to receive research material already beforehand. The probes produced beneficial material for the researchers. Few of the interviewees were currently located in Finland. The challenge of this process was the distance between the researchers and the interviewees. Contextual interviews are situations, where a researcher should observe the signs and behaviour of an interviewee. Since many of these interviews were executed via Skype internet conversations, the observation was more difficult than it was during the face-to-face interviews. If all these interviews could have been executed alongside, more thoughtful and diverse outcomes could have been reached. However, through a intensive knowledge of the theory and an effective service design process, the outcome of these interviews was managed to turn from the needs and desires of the target group into versatile and desired service concepts.

The service design process itself was executed straight after receiving the probes and executing the contextual interviews. The researchers used service design tool, personas, in order to deepen the understanding of the potential customers of the created service concepts. The outcome of the interviews was analysed by using a service design tool affinity diagram. The disconnected factors were organized under main headings and according to these headings, the contents of the service concepts were designed. The design process of the contents included components of the theory, inspirational interviews and contextual interviews. All these components were designed to answer the needs of the potential customers of the services, the potential service providers and the environment. The factors of national and local economies, ecotourism and the importance of sharing knowledge about nature's well-being factors were also taken into account. When the service concepts were designed, the researchers used service design tool called storyboard, in order to model the service concepts for easier understanding of the output. As the output of the service design process, two different user-centred service concepts were designed in order to satisfy the needs of the potential custom-

ers of the services, the author of the development project, the environment and the whole competitiveness of Finnish economy and the desirability of Finnish ecotourism business.

The output of this development project was two ecotourism concepts, which can be developed into pilot services in Nuuksio national park and duplicated into forest therapy services, which can be executed in different national parks and wellness centres across the country. The source of these services is nature-based well-being, which produces mental wellness created by aesthetic factors and multi-sense experiences, produced by nature. The service concepts include also physical education in a recreating and relaxing environment, which increases not only mental wellness as its part, but also constructs physical well-being. Both of these services are based on sharing the knowledge of the environment. Nature is providing a wide variety of well-being resources in many different forms. As this knowledge is shared, human beings are more aware in using nature as an operational environment of physical education. This develops their overall well-being without a notice during an exercise. However, by increasing the knowledge of the importance of diverse nature, human beings can learn to respect nature and treat it better. The both contents of the developed services are based on the proven formally researched well-being factors. During the service design process, these factors are designed to execute, as a service concept in a way the target group would like to experience them. This makes the new service concepts extremely desirable and competitive in international markets of tourism. While increasing the demand of Finnish ecotourism services, the common well-being is raised economically and from the point of view of national health, not to mention the development of the international competitive advantage and the profits it is creating.

5.2 Recommendations for upcoming research

As it was noted in the conclusions, the research regarding to forest therapy has been slight both in Finland and internationally. The research has commonly focused on examining the well-being factors of spas and other kinds of services of wellness centres, but processes related to forest therapy itself have aroused less preoccupation. Also other parts of the research of tourism have been mainly executed by universities of applied sciences, which naturally concentrate their focus mostly to Finnish tourism and to the occupation of a professional of tourism business. As the conclusions of this development project noted, many different directions are interested in ecotourism and forest therapy when it can be comprehended as design and development of processes between the development of business activities and strategies, services and customers. However, it could be interesting to research the well-being factors of nature connected to the design of ecotourism services interdisciplinary between the professionals of medical sciences and tourism business. Especially from the point of view of economic sciences, producing exotic ecotourism services, which increase the overall well-being

of human beings, is an interesting objective of a development project. By exploiting these factors, companies are able to differentiate from the competitors, increase their productivity and reach competitive advantage.

The well-being resources of nature, the utilization of these resources and turning them into different kinds of ecotourism services are an interesting and inexhaustible field of studies. The demand of different kinds of wellness factors arose as a key factor of the design process of ecotourism services during this development project. Therefore the development project could be continued and extended concerning this sector. The researchers find the implication of target group members and stakeholders as an interesting sector of a service design process. By integrating these stakeholders to the process even more intensively, even deeper and more desirable outputs could be reached.

This development project was executed using very typical methods of service design research, by using inspirational and contextual interviews. It would have been very interesting to add testing of a pilot service to the entirety of the development project and study the functionality and influences of these services by using observation research. As an example, using methods of observation research during the experimentation of different activities of physical education during the execution of a service concept, new points of view and diverse amount of innovative ideas would have been reached.

As it was mentioned in the methodological part of this development project, the theory of this study is aspired to compose in a way, that another researcher is able to execute a similar development project and compare its results to the results of this study. Therefore it would be interesting, if a same kind of a development project were executed in a wider scale, between the Nordic countries as an example, and more countries and their service design projects related to this topic were chosen as subjects of a development project. Even though this development project examined only Finnish ecotourism services, by comparing the results between the other Nordic countries, the similarities of the processes and outputs could be examined. This would probably rise up a wider and deeper range of conclusions.

The output of this development project is two different ecotourism service concept based on the forest therapy. These service concepts are a diverse foundation for upcoming development projects in order to develop them into pilot services, which can be experimented and executed in Nuuksio national park. Loven (2011) emphasizes the importance of designing and marketing carbon neutral ecotourism services. The difficult mission of Finnish ecotourism service providers is to convince tourists about carbon neutrality of Finnish ecotourism. When executed, it could be a huge competitive advantage for our nation. This could also be an interesting subject of future development projects.

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Attachment 1 theme interviews

Background questions:

1. What sex are you?
2. How old are you?
3. What is your occupation?
4. In which town and country do you live?

Task 1

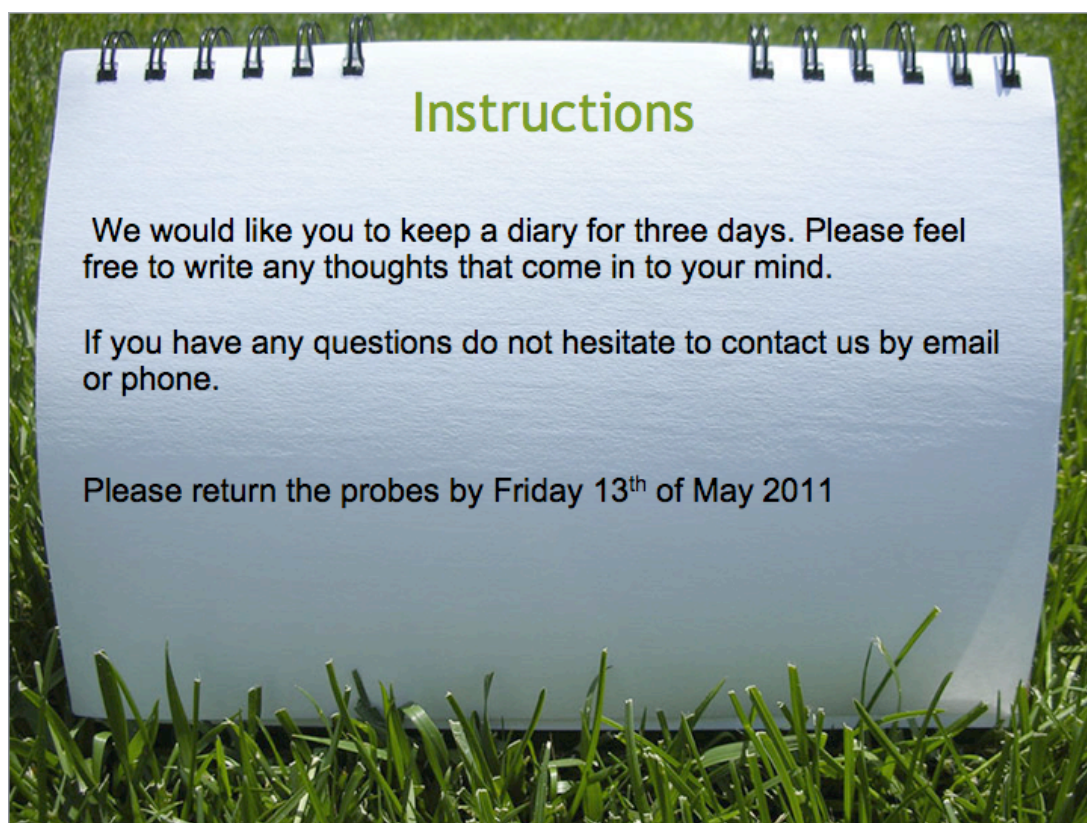
1. What is your experience of spending time in nature? What are the best things? Why?
2. What kind of well-being factors would you like to experience in a eco-tourism service? Why?
3. What kind of eco-tourism services you would like to experience? Why?
4. Would you like to do some sport activities while enjoying the eco-tourism service? If yes, what kind of activities and why?
5. Describe what nature means to you?
6. Nature provides different kinds of things for human beings like for example food, water purifying and herbal medicine. What kinds of things you value the most?
7. What has been your best service experience (hotel, restaurant, shopping etc.)? How would you describe it, what happened?
8. What has been your worst service experience (hotel, restaurant, shopping etc.)? How would you describe it, what happened?
9. What equipment would you expect to get from a service provider (nature related service sports, exploring, trekking etc.)? Or would you rather use your own?
10. What kind of facilities (toilets, restaurants, accommodation etc.) would you expect the service provider to provide?

Task 2

Sort the following motivation cards in the order of importance. Number 1 is the most important thing and number 10 is the least important thing. Please explain why the five most important things are important to you.

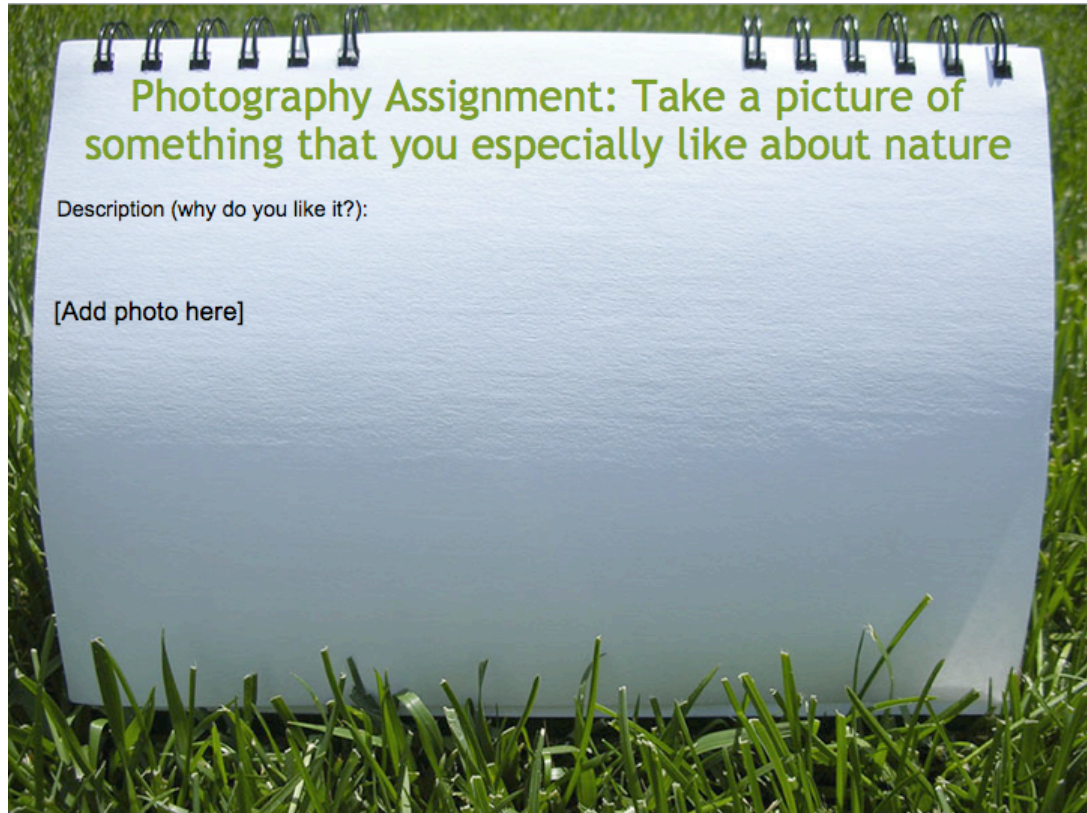
- I enjoy the silence
- I enjoy the midnight sun
- I enjoy the polar night
- I enjoy the snow
- I enjoy the lakes and rivers
- I enjoy sauna
- I enjoy sustainable traveling
- I enjoy spending time alone
- I enjoy spending time with other people
- I enjoy watching the animals in nature

Attachment 2 probes









Attachment 3 personas

Mark

"I want to experience different kinds of sport activities in inspiring environment."

"I need some balance to my working days."

Hi, my name is Mark. I'm 35 years old and I work as an IT Consultant. Currently I'm living in a city center of Berlin in a small studio.

My 10 hour long working days are really hectic and usually I don't have time even for a lunch. I just next to my computer and mobile phone the all day long.

Quite often I'm deadly tired when the weekend begins. Once a year I go to a package holiday to some nice and relaxing place.



Lisa

"I want to get to know nature and understand what's behind it."

"Nature means a gift that I want to protect."

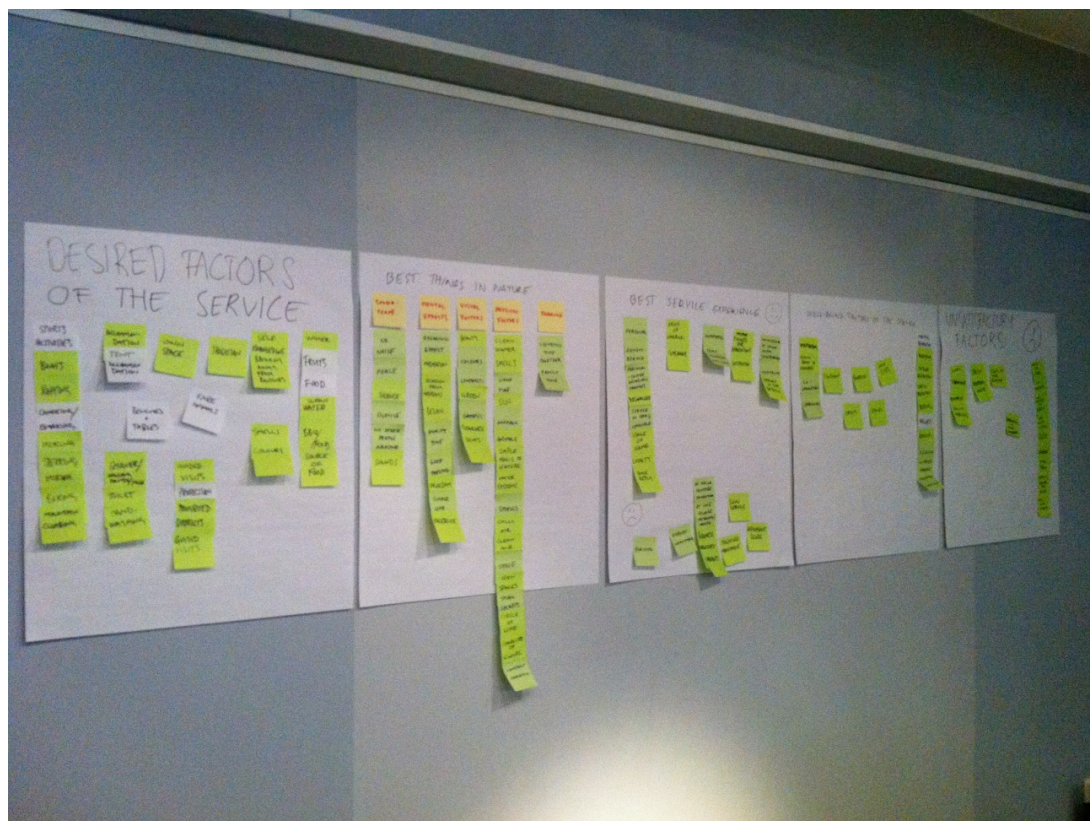
Hello, I'm 26 years old and working as an assistant in an international ad agency. I live in Albacete, Spain with my husband and our small daughter.

Nature inspires me a lot and I like to draw outside. I'm interested in different cultures and especially exotic Nordic countries are close to my heart.

In weekends we usually drive to the lake for a picnic with my family. When I was younger I traveled a lot around the Europe as a backpacker.



Attachment 4 affinity diagram example



Attachment 5 storyboards

Storyboard of Guided Trekking in Nuuksoio

1. Trigger for forest therapy service concept




Current state of the world is unpleasant. Most of the European people live in big cities far away from the nature. Working conditions are getting harder because of the increasing demand of productivity. This leads to exhaustion, stress, indisposition and frustration. People feel that they don't have enough time to spend with their closest relatives and friends. Visually unpleasant and unclear environment produces negative feelings, which is increased by noise. People would like to understand the nature better and return to their roots by giving something back to the nature.

2. Awareness of the concept in action





The purpose of the service is to enjoy the nature by experiencing its landscapes, colours, smells, voices and silence. The service takes its users to a journey of learning about well-being resources of the nature. It also includes improving the state of the environment by planting trees to old stock roads, soil improvement and planting undergrowth. Service also increases the knowledge of nature and its ecosystem services by collecting food and fuel for the use of group. At the end of the tour there is time to enjoy about the offering of the forest by eating the fresh hand picked food.

3. Results in action




As a result of the service is a group of recreated people. The visual and sensual affects increase mental well-being immediately and physical education improves the physical performance. The health influences of forests are affecting immediately with greater activity of parasympathetic nerves that promote relaxation, lower levels of cortisol, lower blood pressure, slower heart rates and reduced activity of sympathetic nerves related with reactions to stress.

Storyboard of Forest Triathlon in Nuukisio

1. Trigger for forest therapy service concept



I'm so exhausted and stressed.



Current state of the world is unpleasant. Most of the European people live in big cities far away from the nature. Working conditions are getting harder because of the increasing demand of productivity. This leads to exhaustion, stress, indisposition and frustration. People feel that they don't have enough time to spend with their closest relatives and friends. Visually unpleasant and unclear environment produces negative feelings, which is increased by noise. People are losing touch with the nature and physical education in relaxing and inspiring environment is a way to re-connect people with the nature again.

2. Awareness of the concept in action



I really enjoy spending time in here with my friends. Beautiful landscape and brilliant colours, awesome sounds and refreshing smell of forest.

It is interesting to learn new things about the nature and its eco-system. It's great that I can give something back to the nature.



Wow! I didn't know that nature can provide such a great meal.

The purpose of the service is to enjoy the nature by experiencing its landscapes, colours, smells, voices and silence. The service takes its users for a journey to experience different kinds of sport activities in different kinds of natural environments. The purpose of the service is to produce well-being factors of forest therapy and simultaneously re-connect them with the nature. At the end of the tour there is time to enjoy barbequeing and experience the beauty and the silence of the nature.

3. Results in action



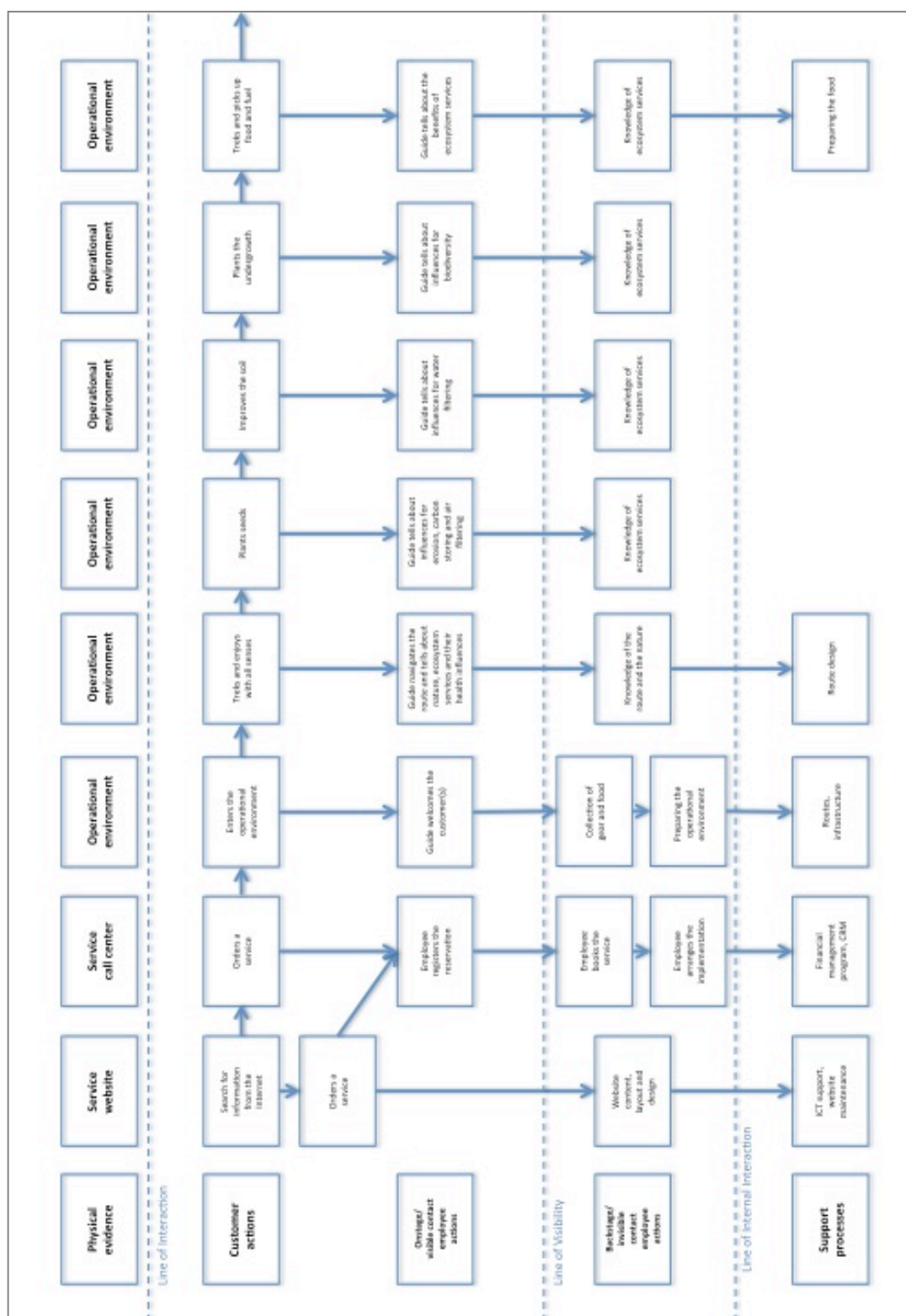
I feel great after spending only few hours in a forest. Should definitely do this more often!

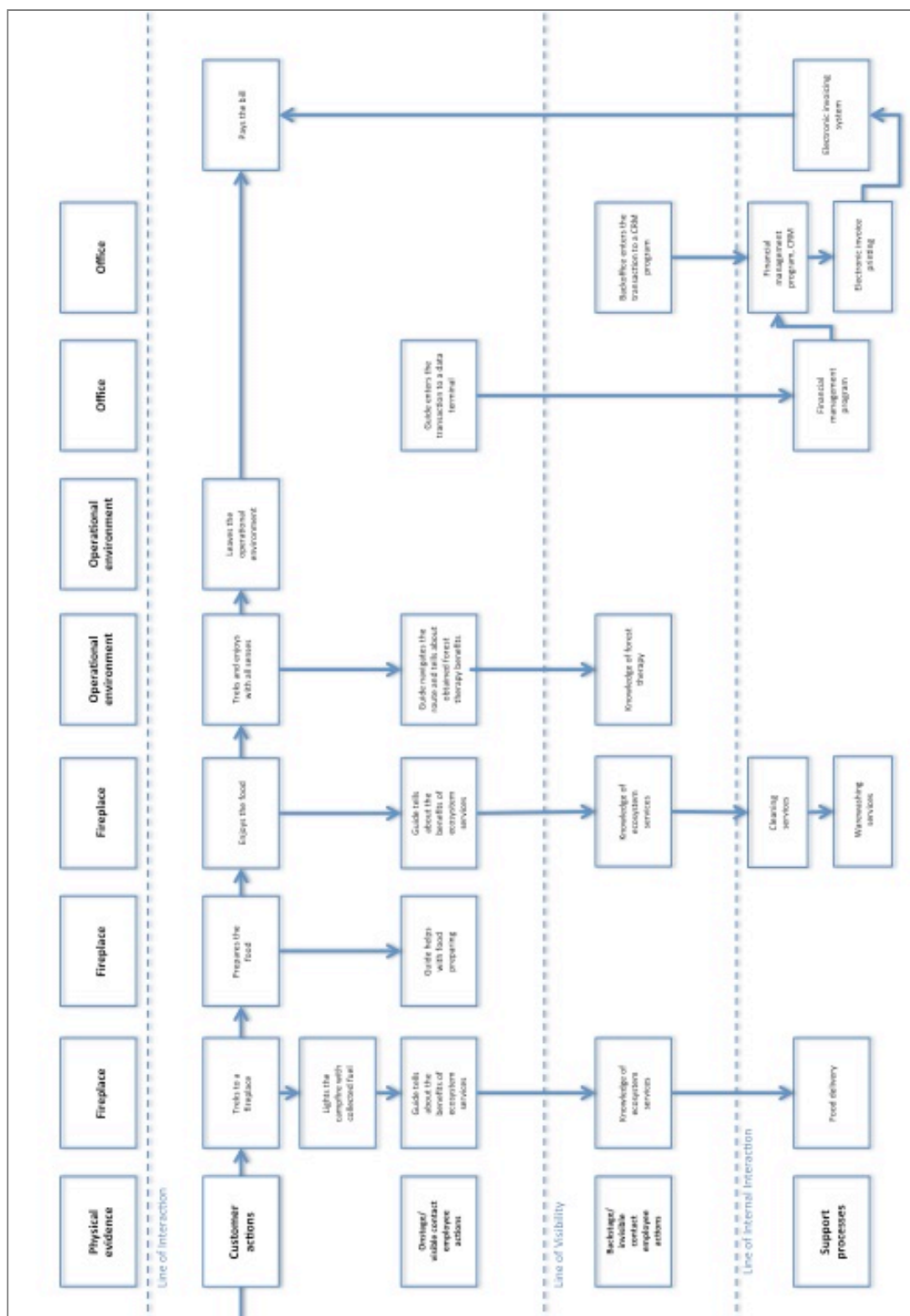


I don't worry about anything at the moment. It is just great to relax in nature.

As a result of the service is a group of recreated people. The visual and sensual affects increase mental well-being immediately and physical education improves the physical performance. The health influences of forests are affecting immediately with greater activity of parasympathetic nerves that promote relaxation, lower levels of cortisol, lower blood pressure, slower heart rates and reduced activity of sympathetic nerves related with reactions to stress.

Attachment 6 blueprint of guided trekking tour





Attachment 7 blueprint of forest triathlon

